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THE

ANNALS

OF

INDIAN ADMINISTRATION,

EDITED BY

MEREDITH TOWNSEND

VOLUME III.

SERAMPORE

1850

00108541

ADVERTISEMENT.

THE Governments of India publish, on an average, a volume every four days. From reports affecting the entire Empire to accounts of local drainage, from the opinions of the ablest officers to the cost of a cutcha bye-road in a frontier province, every thing finds a place in these publications. There is scarcely a subject connected with Indian Administration on which they do not exhaust official knowledge. There is no officer in the country who may not obtain from them, in reference to his special task, all the advantages of experience. The information thus vast is, however, widely scattered. The records of one Presidency are scarcely known in another. The books are not very readily procurable, and above all they are like all other blue books, dry, ill-digested, and overlaid with detail. It costs an hour to find a fact, and in India men who care about facts cannot spare hours.

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NOTE.—"The Annals of Indian Administration" being published quarterly, the numbers for the year will henceforth constitute one Volume. For the whole Volume a title-page and a complete Index will be published with the last issue of the year, instead of with each number as heretofore. The present Part, which is X. in the series, will consequently be I. of Volume III.

THE

ANNALS

OF

INDIAN ADMINISTRATION.

VACCINATION IN THE MADRAS PRESIDENCY, 1857.

Madras Records, No. LI.

THE Director-General of the Medical Department, Fort St. George, forwards to the Governor the returns of vaccination throughout the Madras presidency in the year 1857. The total number of vaccinations was 3,85,200, shewing a decrease of 17,240 as compared with the previous year. In seventeen of the districts and zillahs there was an increase, but in eighteen a large falling off, ascribed, in the case of three, Nellore, Tanjore and Coimbatore, to the greater accuracy of the vaccination returns. Each vaccinator operated, on an average, on 1,167 cases, shewing a decrease of 145 each from the return of 1856. This general decrease is accounted for by the fact that five Assistant Apothecaries, who acted previously as Circuit Superintendents, were withdrawn for Military employ, that native prejudices, especially in Honore and Salem, were so strong as to lead not unfrequently to opposition from the local native authorities to its spread, and that, in other cases, a wide-spread apathy on the subject prevailed. To remove some of these difficulties it is recommended that the question of making vaccination compulsory be considered, that European superintendence should be restored by nominating an itinerant Superintendent to each zillah, that the Zillah Surgeons should personally visit the talooks, and that batta should be paid to the poorer classes on the plea that the mothers are prevented from going out in search of their livelihood for a period of eight days, when their children are undergoing the process of vaccination, and that already in almost all the larger towns rice is issued in such cases. Much is looked

for, also, from the spread of education, and the removal of existing prejudices; and to promote this, short treatises on vaccination in the vernacular language were being circulated. The Government authorize eight days' batta to be issued when necessary, as recommended.

The decrease in the number of vaccinations is further accounted for by the prevalence of small-pox in certain localities. It is believed that the vaccine lymph was pure and genuine. The most diligent vaccinators are recommended for rewards. Though vaccination is most successful in infancy, the proportion vaccinated to the number of births is only 5·7 per cent. "In the Northern Division the ratio of failures amongst infants under one year has been 97 per 1000; amongst adults 140. In Malabar and Canara the failures per thousand amongst infants have been 56, and amongst adults 195; and in the Ceded Districts, the ratios of failures have been 74 and 145 respectively per thousand, while on the whole number vaccinated, the proportion of failures in infancy has been 77; and in adult age 99."

The expense of the whole department during the year was Rs. 36,017-2-10, or an excess above the disbursements of the previous year of Rs. 5,251-12-8. "The average expense for every hundred vaccinations has been Rupees 12-8-11; at Tanjore the cost per hundred operations has only been Rupees 4-6-10; at Kurnool it has been 66-1-7, these are the highest and lowest rates."

At Bellary the number vaccinated was 8,726, showing an increase of 215 over the former year. The opposition to, and gross superstitions regarding, vaccination, are said to be on the increase. At Calicut the Assistant Apothecary details the difficulties which were met with and the excuses which were alleged:—

"1st. The father of the family or other male head is absent from home, consequently the children cannot undergo the operation.

"2nd. The daughters (unmarried) have attained the age of maturity, and in our caste it is objectionable.

"3rd. The child is too young (although above six months and often above six years too) and we cannot bear to witness the child's sufferings.

"4th. What is the use of vaccination when we will have to go through the disease of small-pox, and that too two or three times!

"5th. This day is unfavorable, come another time.

"6th. We must, according to our caste-customs, use daily ablution, consequently it is objectionable."

At Chingleput, small-pox was very prevalent, and it was found that the vaccinators worked only one day in the week. At Co-

chin there had been, during the year, 1900 successful and 111 unsuccessful cases of vaccination. The lymph used produced true vesicles, but small and often with scarcely any appreciable areola, and accompanied with a slight eruption. The Assistant-Surgeon was about to have a pamphlet on the subject translated into Malayalim. The Assistant-Surgeon of Coimbatore notices the apathy and ignorance of the vaccinators themselves as a chief obstacle to success. At Cuddalore many of the patients vaccinated were adults varying from 18 to 25 and 30, and having cicatrices of previous vaccination, the revaccination was successful in most instances. At Ganjam the Ooriah inoculators, and intense caste prejudices, stood in the way of success. At Kurnool, the Circuit Superintendent was deprived of his appointment for unlawfully compelling the people to submit to vaccination. In the town itself the spread of small-pox in its most virulent form led the people to seek the benefit of vaccination with great eagerness. In the presidency city of Madras the following were vaccinated :—

"Hindoos, Males, ...	3,979
„ Females, ...	4,127
Mahomedan, Males, ...	331
„ Females, ...	230
European, East Indian, Males, ...	285
„ „ Females, ...	275
Total, ...	9,227"

At Rajahmundry some families of high caste, formerly bitterly opposed to vaccination and the use of European medicines, sought eagerly for both. In Salem and other districts the people generally refused to allow the vaccinators to remove any lymph from the vesicle after the operation, under the impression that "much of the protective power of the prophylactic was lost."

TABLE *exhibiting the amount of population of the several Collectorates, &c., the number of Births calculated thereon for the year* 1856, *number vaccinated under one year of age, and the presumed number remaining unvaccinated during the same period.*

Collectorates and Districts.	Population as per Census for 1850-51.	Average Births annually at 3 per cent. on population.	Number vaccinated under one year of age.	Number not vaccinated compared with Births.	Ratio per cent. of vaccinations on the number of Births.
Madras, ...	7,20,000	21,600	2,952	18 648	13·6
Chingleput, &c. ...	5,83,462	17,503	218	17,285	1·2
North Arcot, ...	14,85,873	44,576	3,234	41,342	7·2
Guntoor, ...	5,70,083	17,102	124	16,978	0·7
Nellore, ...	9,35,690	28,070	1,541	26,529	5·4
South Arcot, ...	10,06,005	30,180	880	29,300	2·9
Ganjam and Chicacole,...	9,26,930	27,807	281	27,526	1·01
Vizagapatam, ...	12,54,272	37,628	290	37,338	0·7
Rajahmundry and Injeram, ...	10,12,036	30,361	159	30,202	0·5
Masulipatam, ...	5,20,866	15,625	501	15,124	3·2
Trichinopoly, ...	7,09,196	21,275	1,551	19,724	7·2
Salem, ...	11,96,377	35,861	4,544	31,317	12·6
Tanjore, &c. ...	16,76,086	50,282	5,696	44,586	11·3
Madura, &c.... ...	17,56,791	52,703	4,434	48,269	8·4
Tinnevelly, ...	12,69,216	38,076	1,953	36,123	5·1
Coimbatore, ...	11,53,862	34,615	4,683	29,932	13·5
Mangalore and Honore, ...	10,56,333	31,689	913	30,776	2·8
Calicut, &c.... ...	15,14,909	45,447	76	45,371	0·1
Bellary, ...	12,29,599	36,887	2,954	33,933	8·008
Cuddapah, ...	14,51,921	43,557	1,397	42,160	3·2
Kurnool, ...	2,73,190	8,195	231	7,961	2·8
Total, ...	2,23,01,697	6,69,039	38,612	6,30,427	5.7

THE AGRICULTURAL EXHIBITIONS IN THE MADRAS PROVINCES.

Madras Records, No. L.

THE record continues the reports of these exhibitions in the seven districts of Rajahmundry, Guntoor, Kurnool, Madura, Tanjore, Tinnevelly, and Salem, in the year 1857. These reports were laid before Government by the Board of Revenue on the 9th of March, 1858. 1857 is the third year of the trial of the experiment of agricultural exhibitions with a view to encourage improvement in agricultural produce of all kinds. The Board are not satisfied with the results of the exhibitions, but in consideration of the difficulties to be overcome, and the importance of the ends to be obtained, feel encouraged on the whole. That misconception of the principles of the experiment largely prevails, is illustrated by the circumstance that "in many instances the contributors have expressed their surprise and disappointment at not receiving rewards for merely attending with such articles as they thought fit to bring." The Board recommend, and the Government approve of, the plan of holding exhibitions in some districts only biennially, and recalling permission to hold them when the year is likely to prove an unprosperous one. The total amount expended on the seven exhibitions reported on, is Rs. 13,560-6-3, while the limit placed by Government on the expense in each case is Rs. 5,000.

The Rajahmundry exhibition was held on the 25th and 26th of February, 1857, at an expense of Rs. 2,086-5-9. The building of the former year was enlarged in expectation of an increase in the number of exhibitors, but in this respect there was a decided falling off. The quality of the goods exhibited, however, was superior to that of the last year. In cotton the quantity produced from imported seed was small, but the specimens of indigenous-cotton were numerous. Of red cotton that from the Rally talook was considered very good. A specimen of hemp from the Government workshop at Dowlaishwarum was highly praised, as also samples of goga vara and kitta vara fibres. This latter fibre was exhibited woven into a handkerchief very similar to coarse China grass-cloth, but the high price asked for it will not allow of its entering into competition with cotton-cloth. Two batches of indigo manufactured in the European method were exhibited, and one of them considered worthy of a prize. The show of paddy and wheat was good. The samples of sugar were excellent, especially that made direct from the cane at the rate of 3 Rs. per maund, and that from

cane and palmyra jaggery at 4½ Rs. The metals exhibited were failures. There was no steel, but little iron; and a few baskets of ore alone from Taudemallah talook were judged worthy of a prize. The colour and quality of the hides, with the exception of white-kid skins, were poor. The Darogah of Gootalah had formed an excellent collection of gums. The saltpetre was very superior, that exhibited by Mr. Charles Rundall of Razole being chemically tested, and offered at 3 Rs. per maund, received the 1st prize. The lack of interest in the exhibition this year as compared with former years, is ascribed to the absence of agricultural implements and machinery. Four looms for weaving gunnies, and making drills, napkins and long cloth, were at work, belonging to G. H. Faulkner. A model steam-engine by a native workman trained in the Government workshop, and much superior to those exhibited on former occasions, was found to be perfect with the exception of the boiler. Specimens of tapioca and vinegar made from the lees of uranta wine, received prizes. The pottery was inferior. Some gold embroidery was much admired. The show of cattle was a failure. A prize of 10 Rs. was given for the best specimen of bread, and of 5 Rs. for a seamless bed.

The Guntoor exhibition was held at Baupetlah on the 17th and continued till the 20th of March. The amount of prizes was Rs. 1,999-8-0. The attendance was very large, some natives having brought agricultural produce from a distance of 130 miles. The results of the exhibition however were, except in the show of cattle, disappointing; no advance had been made from the previous exhibition. Discontent among those who did not receive prizes was general, and hence the committee recommend that a small prize should be given to *every* article of real excellence exhibited instead of large sums for the best only. The poverty of the natives, the distance which many have to come, and prolonged absence from their homes, lead the committee to this conclusion.

The 1st class consisted of live-stock. The full-grown bulls were of great size and strength, the three years' old not so select, the 2 years' old far finer, and the yearlings, for which large rewards had been offered, most superior. Seven of the 23 pairs of working bullocks exhibited, attracted attention. Of these three succeeded in dragging a laden bandy with both wheels locked for various distances through exceedingly deep sand. The cows, though disappointing in themselves, shewed an improvement over those of last year. In the second class, agricultural raw products, the cotton is mentioned as fair in quality, the table rice as very fine, the gingely oil-seed as worthy of the full prize allotted, and the sugar-cane as inferior. In the third class, the

agricultural-manufactured products, the cleaned native cotton grown from imported seed was deficient in quantity, the cotton was not at all cleaned, and indigo from Nellore and tobacco from Guntoor obtained each a prize; the fibres exhibited were not fit for exportation to Europe, there was no sugar, and but little competition in oils. Non-agricultural products composed the 4th class. The Rev. Mr. Groning exhibited a loom calculated to improve the manufacture of cloth, of simple construction. "It has a flying-shuttle, and a convenient arrangement of pedals and rollers. The frame-work was of cast iron but might easily be made in wood. It attracted the attention of the Ventapolem cloth-merchants, who proposed getting some looms made up from this model. A large ebony box (exhibited by Khan Saheb of Ongole) was a singular specimen of ingenuity and contrivance, being said to contain upwards of 90 compartments, drawers, &c." B. Bhadriah, a native artist of Masulipatam, is praised for his copper-plate engravings. A large steel-yard of simple construction, and capable of weighing 5 cwt., was exhibited with a view to induce native-merchants to make similar articles for their own use. Pravah Vadadry Sastry had made a wooden printing-press, faulty in the specimens of printing sent forth, but very creditable. Mr. Newill excited curiosity by models of the electric telegraph and steam-engine.

The Kurnool exhibition was held at the cutcherry on the 16th March, and continued for four days. Between 2 and 3,000 were present at the opening. The expense was Rs. 1,364-12-8, and the result, on the whole, satisfactory. Four juries examined and reported upon the articles. Among the cattle there were no cows, the want of which is much felt in the province. Indigo is largely grown in the district, but only two individuals exhibited specimens. The specimens of cloths, silks, and muslins were most tasteful. "The cumblies of Nundicotcoor and quilts of Kurnool are remarkable for durability and cheapness; the improvement of sheep-wool has been undertaken by Captain Nelson."

The exhibition at Madura was held on the 1st and 2nd June, and cost Rs. 2,363-4-2. The competition was most active and the expectations of the committee more than realized. They recommend that the field of competition be enlarged by combination with 2 or 3 other districts. Of nine specimens of cotton sent the prize was awarded to an indigenous sample grown in the Nellacottah talook. The price was Rs. 15 a maund or Rs. 35 when picked. There were specimens of *marool, pullichee, sudamboo* (flax) and plantain fibres, but none of cocoanut. The show in cattle was bad, but in poultry good, owing to the demand for fowls of all kinds from the Ceylon market. Nothing

is worthy of mention regarding the oils, drugs, gums, spices, sugar, and grains. The specimens of coffee were very good, especially those from the plantation of Monsr. Fondeclair at Seroomalay Hills. Some paper manufactured from plantain fibre was pronounced good. "The number of exhibitors amounted to about 500, and the specimens to nearly a thousand."

The Tanjore exhibition of 1857 was held, in a building erected for the purpose, within the Judge's compound at Combaconum, on the 30th and 31st March, at an expense of Rs. 1,993-10-9. The number of exhibitors was 375. The people still looked upon it too much in the light of a mere show, though much of the distrust previously manifested had disappeared. Few of the wet and dry grains were exhibited "in the ear," owing to the season of the year being somewhat advanced. The cultivation of indigo is on the decline in the district. A variety of 30 different oils was exhibited carefully prepared, brilliant, clear and free from offensive smell. A prize was given for the best yerookum fibre. It is strong and valuable 'and when more economical means for its preparation are discovered, is likely to become of importance as an article of commerce.' "A fine collection of drugs all collected and prepared in the district, was exhibited by Mootoosawmy Moodeliar, Native Surgeon, and was considered by the jury deserving of special notice. The collection was accompanied by a list showing the botanical names of the plants, whence derived, their corresponding names in English and Tamil, the part of the plant whence each drug was procured, and finally its properties and uses. The collection was admirably and systematically arranged."

121 different kinds of wood, prepared chiefly on the Puttoocottah talook, obtained the approbation of the jury. Disease had prevented the exhibition of live-stock from being large. Soap is manufactured in the district to a considerable extent, a sample produced by Messrs. Prudhomme and Co. of Tranquebar being considered of superior quality. The Government Nellore bulls were exhibited, but it is suggested that they should be sold, as it is not desirable to continue the experiment longer. Bulls of the Mysore and Salem breeds should be procured.

The Tinnevelly exhibition of 1857 was a decided improvement on that of the previous year. It was held in the cutcherry on the 20th of October, and the articles were examined and prizes awarded by five juries, each jury consisting of one European and two natives. The people were addressed in Tamil on the subject, the band of the 51st N. I. were in attendance, and all the gentlemen of the station were present. The number of exhibitors was 250, and the gratuities distributed amounted to Rs. 1841-12-0. The live-stock of all kinds and

the cloths exhibited, were inferior. As Tinnevelly abounds in palmyra the specimens of sugar and sugar-candy were good, but might have been more abundant.

An agricultural exhibition was held at Salem on the 2nd June. Rs. 1508 were disbursed in prizes. Six separate juries were appointed to award prizes in the six classes into which all the articles were divided *viz.*—1. Cereals and pulses; 2. Fruits and vegetables; 3. Oils, coffee, tobacco, spices and sugar; 4. Cotton, fibres, dyes; 5. Agricultural implements and cattle; 6. Miscellaneous articles. "Although many of the articles exhibited were good and in a few instances very superior, most of the articles, and even many of those which received a prize, were not superior or better prepared than can be seen in any ordinary bazaar; this was particularly the case with the fruits, vegetables, pulses, and cereals also, with but few exceptions. There were some very good samples of fibres, but in many cases where the quality was superior, the quantity was too small to enable the jurors to award prizes to them." The competition in coffee was very spirited, the prize being awarded for that produced on the estate of H. Richardson. The implements, tools and cutlery, were above the average.

RULES FOR GRANTS-IN-AID OF SCHOOLS UNCONNECTED WITH GOVERNMENT IN THE MADRAS PRESIDENCY.

Madras Records, No. LII.

On the 14th July, 1858, the Director of Public Instruction addressed the Government on the subject of the grant-in-aid rules published in 1855, with a view to unfold their principles in detail, and especially to regulate by definite rules and remove from the supervision of the Inspectors, the grants-in-aid of Teachers' salaries. The rule requiring explanation and alteration is:—"applications for grants in augmentation of the salaries of teachers or for providing additional teachers, like other applications for aid, will be referred to a Government Inspector for report on the merits of the school and qualifications of the teachers, and their continuance will depend upon the periodical reports of the Inspector on the merits and proficiency of the teachers, as ascertained at his periodical examinations of the school."

It is objected that "it is left to the discretion of the Inspector to determine in each case by what test the qualifications of the

teacher shall be ascertained," and that every test may be dispensed with save that of ability to teach a class. The new rules lay down "nine standards of qualification, and any teacher, holding a certificate to the effect that he has successfully passed an examination according to any one of those standards, is to be eligible to a grant of the amount specified in the certificate, or of such sum not exceeding that amount as may not be in excess of one-half of the salary contributed by the managers of the school in which he is employed. The qualifications specified in the several classes of certificates, range from those which are requisite to the efficient teaching of a village school, to those which are requisite to the efficient teaching of the higher classes of an institution, in which the course of instruction is designed to prepare candidates for the University Degree. The scale of stipend attached to each certificate is fixed at what appears sufficient to make up the salary of the holder, to a sum suitable to the qualifications described in the certificate, on the assumption that two-thirds of his salary, or double the amount of the grant, will be paid by his employers. Thus, a salary of Rupees 200 per mensem, or Rupees 2,400 per annum being considered a suitable remuneration for the services of a master possessing the qualifications described in a certificate of the 1st class, the amount of annual grant assigned to this certificate is fixed at Rupees 800. The same proportion is observed throughout."

They are drawn up with special reference to schools in which both the English and vernacular language are taught, while no provision is made for Pundits who know nothing but a vernacular, on account of their uselessness. The Degrees of graduates of the University will be considered equivalent to a certificate of the 3rd class, on passing the prescribed examination in a vernacular language, and in the theory and practice of teaching. "Holders of certificates of the 1st class granted by the Committee of Council of education in England are to be eligible, on passing the prescribed examination in a vernacular language, to the grants assigned in these rules to the certificates of the 1st, 2nd, or 3rd class, with reference to the division of the 1st class to which the certificate granted by the Committee of Council may belong.

"The several grades of certificate will render the holders eligible to the following grants:—

"A certificate of the	1st	class	to an annual grant of	Rupees	800
Do.	2nd	„	do.	„	600
Do.	3rd	„	do.	„	400
Do.	4th	„	do.	„	300
Do.	5th	„	do.	„	220

"A certificate of the 6th class to an annual grant of Rupees 160
Do. 7th „ do. „ 120
Do. 8th „ do. „ 80
Do. 9th „ do. „ 40

"But the amount of the grant paid in aid of a teacher's salary shall in no case exceed one-half the amount contributed for the same purpose, by the managers of the school in which he may be employed."

Provision is made on a similar but much lower scale for school-mistresses, which must remain for some time in abeyance. Male pupil teachers will be aided according to the grade of school in which they are to be employed. In Government zillah schools the following rates of stipend will be granted, and so on in proportion according to the lower grade of the school:—

"For the 1st year Rupees 36 per annum.
2nd „ „ 60 do.
3rd „ „ 84 do.
4th „ „ 108 do."

All must pass a satisfactory examination. Masters who are competent to instruct pupil-teachers will receive gratuities as follows;—

"In schools of the higher grade:—
For one pupil-teacher Rupees 60.
two do. do. „ 100.
three do. do. „ 130.

and an additional Rupees 25 per every pupil-teacher above three, who may pass the prescribed examination."

No provision will be made for female pupil-teachers, until the result of the experiment in the boys' case is seen. Government, while noticing one or two objections to the rules, authorized the Director to carry out the whole scheme, being desirous to give it a fair trial. They relieved him from the necessity of referring to them in each case of disbursement of grants-in-aid, and directed the Civil Auditor to pass all grants recommended by him.

THE SUPPLY OF WATER TO THE POONA CANTONMENT.

Bombay Records, No. XLVII.

Several schemes had from time to time been submitted to the Bombay Government for supplying both the city and cantonment of Poona with water. Captain Philip Lewis Hart was

appointed to select and mature the most promising of them, or to suggest one of his own.

On 4th December, 1851, Captain Jacob recommended that a deposit *supposed* to have been formed in the lower Kartriz tank should be removed. On 31st October of the same year, Captain Graham submitted several projects *viz.*—1st that the supply of water in the lower Kartriz tank should be increased by raising the wall, by conveying water into it from the upper tank, and also from a certain nullah and supposed spring; 2nd by constructing sluices at certain natural lakes 12 miles to the west of the city, so as to convey the water into the bed of the river which flows past the city; and 3rd by increasing the supply of the Nana aqueduct. That the cantonment might be supplied he proposed to extend existing aqueducts, to form a bund, and to sink shafts in various directions in seach of springs.

On 15th January, 1852, Captain Kilner proposed that an increased supply should be drawn from the upper Kartriz tank by means of iron pipes and cisterns. Vickajee Meerjee (9th October, 1851) suggested that a large supply of water might be drawn from a spring at Duncowree and conveyed to the Bowanee Peth in the city of Poona, while steam-power might be applied to the Jamsetjee bund water-works, and the supply thus completed. Captain Berthon's (10th March, 1853) scheme was to construct an under-ground bund of masonry across the Kondwah nullah. From the receiver the water would be conveyed to a central cistern near the horse artillery lines, and thence to the barracks and other public places. The Revenue Commissioner, Mr. Reeves (3rd July, 1855) recommended the construction of a dam across the Mootta river, from which iron pipes might convey the water to the city and cantonment, while some of it could be sold for irrigation. The last project is that of Mr. Gerrard (18th October, 1856) who proposed that the cantonment alone should be supplied by damming up the Ambeygaum valley, leading the water to a distributing reservoir at the Wanowree barracks, and therefrom to the various localities in the camp.

Captain Hart, in remarking on those projects, states that a population of 40,000 has to be provided for at the minimum rate allowed in England—twenty gallons per head, which will give in round numbers three hundred million gallons yearly as the required supply. Moreover, as the question of water-supply ought to include that of sewerage and drainage, this water must be delivered into a distributing-reservoir of proper elevation to flush every drain and sewer in the camp. By these standards the various projects must be judged, though at the time that they were started, the population was much under 40,000, and the sewerage of the camp a matter of slight importance. Captain Jacob's report has refer-

ence only to the city of Poona, but it is based on a correct estimate of the extent to which *debris* is accumulating in the lower Kartriz tank. While it might be cheaper to raise the bund wall than to excavate the *debris*, yet immense quantities of the deposit might be got rid of at small cost, by washing it out in a liquid state though the sluices. The general objection is brought against Captain Graham's and Major Kilner's projects for supplying the cantonment, that the quantity of water would be insufficient, while it could not be delivered by gravitation at such an elevation as to supply public buildings, and flush the sewers and drains. The capabilities of the little valley of Duncowree are considerable, but still of so limited a character as make it of value only as a subsidiary source. It could not furnish an independent supply as recommended by Vickajee Meerjee. The water in the Jamsetjee bund-works is polluted, owing to the fact that it receives the whole sewerage of Poona. Captain Berthon's scheme of "an under-ground bund across the Kondwah valley stream" would not yield so large a quantity of water as the required 8,00,000 gallons daily. The plan of both Captain Graham and Mr. Reeves for bringing the water confined in certain dohoos or pools in the Mootta river, is shewn to be impracticable, from the fact that the levels are such as not to admit of water being delivered by gravitation, and that these dohoos are sixteen miles off.

Mr. Gerrard's scheme is next examined, and pronounced the best adapted to present requirements. It does not interfere with the rights of any one, there are no engineering difficulties connected with it, and the valley of Ambeygaum possesses all the requisites for an impounding reservoir. It meets all the objects contemplated of "supplying forty thousand people with pure drinking water from a distance of six or seven miles, and delivering it at convenient situations over a large and extensive camp, besides providing storage-room for a head of water to flush sewers and drains, in addition to the main reservoir." The Ambeygaum valley lies five miles to the south-west of Poona, being formed by the spurs which run out from the Singhur hills. It is deep and precipitous and flanked by lofty hills, while at its lower end the mouth contracts so as to render that the best place for the construction of an earthen dam "across the gorge of the valley near the village of upper Ambeygaum, 1,270½ feet in length, its greatest height above the bed of the stream being 69·86 feet. From the reservoir so formed, the water will be led by either an iron conduit pipe or masonry aqueduct, whichever may be the most economical, to the most favourable point for crossing the small plateau of the spur dividing the Kartriz and Ambeygaum valleys. Through this

portion a tunnel will be driven 2,781½ feet long, opening at the head of the Duncowree valley. The course then for either pipe or aqueduct will be down this little valley for some short distance. If by pipe, it will run almost straight to a distributing reservoir to hold one or two days' supply, near the solitary cells in the camp of Poona; and if by an aqueduct, before reaching the mouth of Duncowree valley, it will branch off, running slightly up the Kartriz valley, crossing the Kartriz aqueduct, round under the village of Beebee Warree, and thence following the sinuosities of the hills to the distributing reservoir above mentioned. If by a masonry aqueduct, the length will be 7 m. 6 fur. 65⅓ yds.; or, by an iron pipe, it will be 5 m. 1 fur. 94⅓ yds., the total fall from the bottom of the reservoir being 80·25 feet. The distributing-reservoir, as above observed, will either contain one or two days' supply, and from it the water will be conveyed to every part of the camp by iron pipes, with a stand-pipe at each cistern. The situation of the cisterns, their number and capacity, will correspond with the wants of the neighbourhood in which they are located."

The catchment-basin of the reservoir contains an area of 4 square miles, 232 square acres, 22,680 square feet. The fall of rain at the average rate of 25 inches will give for four square miles 1,44,73,53,600 gallons, or to take the minimum fall of fourteen inches 81,05,18,016 gallons. If six-tenths be considered as available for the supply of the reservoir, with the minimum fall the amount will be 48,63,10,809 gallons, one and a half times more than is required, or with the average fall three times more. The storage capacity of the reservoir will be 29,08,07,665 gallons "sufficiently near the requirements assumed of 30,00,00,000 gallons for all practical purposes."

In addition to a strong embankment a waste weir must be formed round its eastern end to afford a sufficient outlet for the rapid escape of heavy floods, a cut to prevent the detritus from the hills brought down during the first floods being deposited in the reservoir, an inlet tower placed at the foot of the embankment in the deepest part of the reservoir, by which the water from it will be filtered even when at its lowest level, and a gangway or passage across from the embankment to the inlet tower in length 180 feet and breadth 5¼ feet. To convey the water from the main to the distribution-reservoir in the camp, either an iron pipe or a masonry aqueduct must be erected. As the former would proceed in a direct line its length would be 5 m. 1 fur. 91⅓ yards, while the latter, following the sinuosities of the hills, would be 7 m. 6 fur. 65⅓ yards. Flowing from this pipe or masonry aqueduct the water will be led to a distribution reservoir in a vacant piece of ground in front of the solitary

cells, which is lower than the Ambeygaum nullah by 80·25 feet. Its dimensions for a two days' supply will be 201 long × 130 broad × 7 deep divided by a central wall to allow of one part being cleaned out while the other is in use. A series of iron pipes will hence convey the water to the different parts of the cantonment, where 36 cisterns will be used of varying sizes. The whole length of 5 inch and 4 inch pipes required, will be 8 miles, 1,643 yards and 2 feet, and the total cost four lacs forty-nine thousand four hundred and sixty-three Rupees detailed as follows :—

	Rupees.
"The embankment, ...	1,52,064
„ waste weir, ...	10,517
„ artificial cut to carry off the first floods,	24,651
„ inlet tower, ...	12,172
„ gangway, ...	9,082
„ masonry aqueduct and tunnel, ..	1,14,969
„ distribution-reservoir, to contain one day's supply, ...	22,599
„ camp-distribution, ...	1,03,409
Total, ...	4,49,463"

The appendices consist of an estimate of the population and cattle of the cantonment of Poona, the former being 34,494 and the latter 3,188; of the fall of rain at Poona for the last twelve years; of the amount of water gauged at the great Kondwah nullah, at the back of the upper Kartriz tank and at the large nullah of the Ambeygaum valley. Several formulæ are given for determining the diameter of the conduit pipe, the contents of the distributing-reservoir and the cisterns; and finally a detailed estimate is given of the whole work.

THE RIVERS OF BENGAL.

Bengal Records, No. XXIX.

On 19th February, 1857, Captain W. S. Sherwill, Revenue Surveyor and Boundary Commissioner, forwards to the Deputy Surveyor-General some notes on the rivers of Bengal collected during various surveys.

In 1853 a committee appointed to enquire into the state of the Hooghly, reported that the deterioration of the river from

the quantity of earthy matter annually poured and deposited by its waters was inevitable, and Captain Sherwill believes his notes will confirm this impression.

The name of the Hooghly is English. Before their arrival it was called the Bhaugiruthee from Sooty to the sea. "At present the older name is only used for that portion of the river extending from its exit from the Ganges to Nuddea, where it is joined by the Jellinghee, also an exfluent of the Ganges; from this spot it becomes the Hooghly, a name given to the river after the once-important town of Hooghly, written in old European books 'Ogouli.'" As appears from the maps "the Bhaugiruthee river flows upon the very outside or western margin of the great alluvial basin, and cannot by any possible means ever flow more to the westward, as the tails of the clay and kunkur banks at their junction, with the more recent alluvion, average 12 feet in perpendicular height, and half a mile further inland they rise to 60 and 80 feet. The process of silting up is rapidly proceeding in the beds of the Bhaugiruthee and Jellinghee, and of necessity must continue to do so the further the Sand Heads advance into the sea." The general inclination of the country towards the south-east turns the water of the Ganges from the Bhaugiruthee, and "the vast quantity of dry soil that is blown down from the higher lands during the season of the prevailing hot winds, or from February to June, and the soil that is washed down during the rainy season, or from June to September, both combined, are also assisting to fill up the bed of the Bhaugiruthee." Our information as to the Nuddea river is meagre, but a survey would, in Captain Sherwill's opinion, prove that "the beds of the Bhaugiruthee and Jellinghee are much higher than the bed of the Ganges during its low-water level from the mouth of the Bhaugiruthee to Rampore Bauleah." All attempts at improvement will therefore be money thrown away. "In the natural course of events, these rivers have filled up, never to be again opened, as they were in ages gone by. Rajmahal once stood in the shore of the ocean, but it is no longer there; fleets once sailed up the Bhaugiruthee, they can no longer do that; Issuripore Jessore was, not many hundred years ago, on the edge of the salt water—all its neighbouring jheels or lakes are now filled with brackish water. Nuddea, from its name, was once a new island, with salt water round it—it is now 130 miles from the sea, and the site of a city, up to whose garden walls, eighty years ago, the tidal wave, the bore, rolled; but now it no longer approaches the town, the tide rising and falling about two perpendicular inches only." Rameomul Sen, in his Dictionary (1834) says part of Bengal must have been recovered from the sea, that is to say, as far as Rajmahal, for when Sevanund

Mojoomdar founded Issuripore Jessore, it was a forest on the border of the sea, and numbers of villages derive names from the sea. Moreover neither Grecian, Mussulman nor European historians give any account of Bengal, and the Babóo infers that the country is of modern date. Capt. Sherwill however notes that in the Mahabharat the name of Gunga Sagar is mentioned, and "King Roghu conquered several countries and 'visited Bengal, of which he took possession, erected a monument on the banks of the Ganges, and he proceeded along the coast of Orissa,' showing plainly that the Ganges was then on the west of the alluvial delta, as no mention is made of his crossing the whole of what at present constitutes the 24-Pergunnáhs, Baraset, Nuddea, Jessore, Pubna, Dacca, &c." This view is conformed by other passages. Many places of note are found on the right bank of the Bhaugiruthee, the former bank of the Ganges, such as Budre Haut, 24 miles from Sooty, Rangamutti 4 miles below Berhampore, once called Cusumapuri, and destroyed, tradition says, by a king of Lanka. It was built by Kurun Sen, the ruins of whose palace are still visible. Cutwa is mentioned by Arrian in A. D. 161. Agurdeep means the foremost island, and Nuddea, the new island. This was the capital of Bengal in 1203. The bore reached Nuddea in Sir W. Jones' time; or 24 miles farther than at present. There are other large places on the bank, and Tribeni Ghat is mentioned by Pliny as a place to which ships sailed. The deduction from all this is that the Bhaugiruthee was a great river up which fleets sailed, and which has silted up. The alluvion brought down by the Adige and the Po has altered the appearance of the Italian coast, and "assuming the area of the basin or country drained by the Thames to be 1, the area of the basin of the Po will be 5, and that of the Ganges as 26; the water discharged annually in like manner, assuming that of the Thames to be 1, the Po will be represented by the figure 6, and the Ganges by 148, showing that the Ganges pours nearly twenty-five times the amount of water into the Bay of Bengal that the Po does into the Adriatic: can it possibly then be said that the Sand Heads are stationary? If all things had been equal, the Sand Heads should have advanced 500 miles in the same time that it has taken to form the delta of the Po, or from Adria to the sea; but in the Bay of Bengal, we have an immense depth of ocean to fill up; whereas it is most probable that the Adriatic sea is shallow off the coast opposite to the mouths of the Adige and the Po, and so the land has quickly appeared above the water; whereas a great portion of the silt of the Ganges is most probably precipitated into the 'swatch of no ground,' the supposed great volcanic rent, in which no bottom is

obtained at 300 fathoms, and towards which all the tails of the sand-banks are shown as trending."

The Bhaugiruthee has more than once left its present bed to flow over the country south-east from Moorshedabad, and but for embankments would now probably "leave its present bed altogether, and flow through the districts of Moorshedabad and Nuddea, and fall into the Matabhanga and Bhyrub, leaving its lower course, or from Nuddea to the sea, to be washed by the tides and to become a headless river similar to the Mutlah." The ancient bed of the Ganges is still distinct from Rajmahal to Jungypore, thence to Gunkur, Budrehaut, Rangamutti, Nuddea, Culna, Hooghly, whence the waters divided into the Jaboona, and Sursutti to Gunga Sagar. Captain Sherwill quotes an instance of a change in the course of the Teesta greater than this since 1787. From the ruins of Gour to Dacca along the present Ganges or Poddah, there are no traces of cities, and the Hindoos hold the river in no repute. It seems probable that the waters of the Ganges which formerly flowed south down by Calcutta, broke through the boundary bank of stiff yellow clay, and flowed to the eastward. The great body of water thus liberated flowed into channel now occupied by the Burrul and Nurrud rivers, and "in process of time, the south-eastern inclination of the country favoring its course, the Ganges left the Nurrud and Burrul channels, and poured its greater mass of water down by the present bed, known as the Poddah or Pudma, from whence flow to the south and south-east the Jellinghee, Matabhanga, Goraee, and Chundna." Captain Sherwill is of opinion that the Goraee, with its deep mouth and fierce current, is gradually drawing off the whole water of the Poddah. He is also of opinion from the experience of many years, "that the river from Sooty on the Ganges to Nuddea, at the junction of the Bhaugiruthee and Jellinghee, *is gradually but certainly filling up*, and that it never can be made, with the means at present employed, a navigable river, even for small boats, from October to June, or for nine months in the year; but that it will, for many generations, if ever, be closed as an outlet for the great Gangetic freshes during the rainy season, or from June to September, I do not think possible or probable." Captain Sherwill sums up the probabilities thus:—"If upon a series of levels being taken, it is proved, as is strongly suspected to be the case, that the bed of the Bhaugiruthee is *higher* than the bed of the Ganges, then must all hope of ever making the Bhaugiruthee a navigable river cease; but if, on the contrary, it is proved that the bed is lower than the Ganges, then one remedy for the shallowness of the Bhaugiruthee remains—it is, that the engineering talent at present in India, and at the disposal of the Government, be brought

to bear upon the subject. To open this river from Calcutta to the Ganges would be a great work; it would lessen the labor, hard labor, of thousands, by shortening the present tedious Soonderbuns passage of boats proceeding from Calcutta to the north-west, and would increase trade a hundred-fold. But, as before observed, the proposed series of levels would set the matter at rest for ever; but from all I have seen of the river, I feel inclined to predict that the Bhaugiruthee, by the inevitable law of natural operations, is doomed to be a dreary bed of dry sand for nine months in the year."

On 12th September, 1856, Captain J. P. Beadle, Superintendent of Embankments, submits a combined report from Lieutenant Limond and Mr. McGuinness to the Chief Engineer, on the effect of the removal of the embankments on the right bank of the Damoodah. He is himself satisfied with the result, but would extend the embankments further down the river, as far as the Bancoorah and Calcutta road. Lieutenant Limond in his report enters into details of the state of the country which he himself sums up thus:—"We find the lower part of this country, *viz.* bounded on the south by the Buxee Bund, on the west by the Roopnarain, east by the marginal ridge of the Damoodah, and north by a line joining Marakana and Hurridulla, to be from 8 to 10 feet under water, grain cultivation suspended, and but one crop of *boru dhan* yearly obtained. That the country is depopulated, the inhabitants being obliged to go elsewhere to seek means of support, and that it is in every one's mouth that all must in due time follow who have not other source of wealth. Had we continued due north, a larger tract of country would come under this head. *Secondly*, that the Damoodah khal is the source of much damage to the country, and that the directions of its current by what they formerly were show unmistakeably the rise of the Damoodah bed, whatever conclusion may have been arrived at from comparison of sections. *Finally*, that the inundated country over which we were unable to pass from want of water has either the crops entirely destroyed, or is a wilderness; and that if the revenue of this tract is still enforced, the loss must fall upon the zemindars, as they will be unable to get people to remain, far less to cultivate." He recommends that the embankment should "be constructed efficient as far as Kistopore; that breach re-opened, and thence the lines remodelled as far as Bynan, including the connecting of the Debursa and Hurridulla lines with that on the island of the Damoodah khal by dams across both ends of that channel." Mr. McGuinness generally confirms Lieutenant Limond's view. On 18th April, 1857 Lieut. Colonel Goodwyn, Chief Engineer, submits his report. The destruction of 20 miles of embankment on

the right bank of the Damoodah was ordered in 1855, but was not executed till the beginning of 1856, when 15 miles were thrown down for the Damoodah to spill over. The season of 1856 was one of extraordinary rain. "The general effect of the free spill of 15 miles at and below this point down to the great bend was to prevent the flood from rising above 16 feet on the Edillpore or Burdwan guage (20 and 22 feet being the dangerous heights in former years to the town of Burdwan.)

"Southwards of the bend, the part closure of the great Kistopore vent, and the filling up of the other breaches, forced the river volume down into the narrower reaches, and caused the flood there to rise to an unprecedented height, breaching the embankments on the right bank in fifteen places, and those on the left bank in two spots." Colonel Goodwyn quotes and believes the reports of Lieutenant Limond and Serjeant McGuinness on the state of the inundated country, and mentions that in 1856 Baboos Ramapersaud Roy and Joykissen Mookerjea desired to throw "dams across the Damoodah river at Modeepoor, across the Roopnarain or Sankree at Thakooranee chuck, and across the Seelai river at Ghuttal, in order to head up and divert their respective dry-weather streams into certain of the interior khals, and by their ramifications to throw the influx of water on to the surface of the lands adjacent." The Seelai dam was successful, and the Roopnarain dam stood, but the Damoodah dam failed from delay in construction. Colonel Goodwyn is of opinion that a system of irrigation has become indispensable. As a beginning he would recommend the zemindars' scheme as the best to be devised.

Colonel Goodwyn describes the works still in progress, and finally recommends that sanction be accorded to the zemindars' petition, and that attention be paid to the orders directing levels to be taken on the left bank of the Damoodah. Letters from Captain Beadle follow, detailing the measures for removing the embankment, and a report differing from Lieut. Limond's as to the destruction caused by the inundation, and describing the features of the country, the works existing, their defects, repairs and changes required, in minute detail. Some papers on matters too full of technical detail for condensation follow.

On 19th May, 1858, the Secretary to the Government of Bengal submits a letter summing up the general result. "The result of these measures, as respects the waters of the river, was, that although the rains of 1856 were unusually heavy, the flood in the long reach of the Damoodah, south of Burdwan, never rose higher than 16 feet, being a reduction of at least 4 feet from the height of the dangerous floods of previous years." Lower down the repair of a great number of breaches had con-

fined the water, and the flood was higher than usual. Several breaches occurred, the worst being at Soonaghur. "Here the embankment, which is said to have been too low, was overtopped, and a very bad breach occurred, by which the country bordering on the river as far south as Amptah was flooded; but fortunately a retired embankment prevented the inundation from extending to any great distance inland." Captain Beadle recommended further relief by removing six miles of embankment, but Lieutenant Limond threw down only 1½ miles alleging "that 'from Siallee to Poorsoorah, the villages continuously extending along the right bank will not allow the demolition policy; added to which, in this portion, the very great difference of level of the bank outside the embankment and country in rear would at once put a veto to the proceeding.' Moreover, Mr. Limond 'did not think any more relief was wanted,' and is of opinion that, 'if further demolition take place, the consequences will be most disastrous.'" Mr. Young reviews Mr. Limond's and Captain Beadle's accounts of the state of the country after the demolition of the embankments, and observes that the investigation of this important subject should be more proper and thorough. The Chief Engineer has been ordered to carry out such an investigation next cold weather. On 15th July, the Officiating Secretary to Government of India, Public Works Department, replies, admitting that the subject has not been sufficiently investigated, but remarking that Captain Beadle's plan for giving farther relief, "which was only experimental and preparatory to a very general removal of the embankments" was not fully carried out. The fuller enquiry recommended is sanctioned, and the following principles laid down:—"The Engineers, instituting these additional enquiries, should recall clearly to mind the matter in hand. It is so to deal with the river channels of Western Bengal as will secure the passage of the flood waters to the sea with the least possible injury to the general face of the country. To accomplish this successfully, it is obvious that the very first step is to obtain a complete knowledge of the form of the surface of the region in which operations are to be carried on. The extent of the inundations, and the direction, the velocity, the depth, and the general destructive powers of the flood waters, of course directly depend on the levels of the surface, and until these levels are accurately ascertained, the Engineers will, in a great measure, be working in the dark. The first thing to be got, therefore, is a contoured map of the country. No very great detail need be gone into, but the work should be undertaken in a systematic way, so that the essential features shall be developed by the first operations, and so that further details may be filled in afterwards, as oppor-

tunity or necessity arises. Particular attention should be paid to have all future levelling operations connected with fixed points of the general series of levels, so that all freshly obtained information of this sort may at once be brought into relation with the data that existed before."

THUGGEE AND DACOITY.

Bombay Records, No. I.—New Series.

On 11th January, Mr. J. D. Inverarity, Political Agent, Southern Muratha Country replies to an enquiry from Government, that dacoity is emphatically a profession, though not necessarily hereditary. The dacoits enter on their duties at sixteen, and thenceforward live by plunder, though their ostensible duties are agriculture, mat-making, snake-charming and conjuring. Burria Naik, an old dacoit, confessed to four or five robberies a month, Kullolia Naik to five hundred. Jail discipline is valueless to correct these men. Dacoits are not necessarily Kaikarees, or Kulkorwees. Organized gangs of villagers exist under leaders. He is not of opinion that it would suffice to punish the leaders. Capt. Hervey has seized many Kulkorwee and Kaikaree leaders, but the trade though crushed for a time in the Southern Muratha Country has revived in the Bellary Magistracy.

Special provision for the families of dacoits is not called for, the remainder of the gangs supporting them.

Any colonial organization of the dacoits would depend for success upon the loss of personal liberty. If free, the dacoits would at once return to their old habits. A School of Industry like the one at Jubbulpore might be most beneficial.

On 21th January, Captain Hervey reports that in his opinion to confine punishment to leaders would be to render the department nugatory. Act XXIV. of 1843 was enacted to ensure more stringent measures for the conviction of professional dacoits, and it leaves no course open to any authority save the punishment of every dacoit. The instructions issued by Secretary Lumsden warned Captain Hervey against the acquittal of any dacoit prisoners. The Court of Directors renewed the injunctions against relaxation, in their despatch No. 27 of 18th Sept. 1850.

In my report says Captain Hervey:—"No. 110, dated 10th July, 1849, and in subsequent despatches, I have shown that the dacoits, against whom I have been conducting operations, *were all professional gang robbers by hereditary descent;* that, with unbounded license, they had systematically parcelled out among

them the whole country, each partition forming the 'preserve' of the gang to which it had been apportioned; that poverty urged them no more in their evil practices, than the desire to earn a livelihood propelled any operator to frequent efforts in his vocation; and that the punishments hitherto awarded them *had not served to check them from wrong-doing.*

"The minutes of a meeting of dacoits I lately held show to what extent such efforts on the part of these dacoits have been renewed; that incarceration has been to them but a temporary calamity—temporarily affecting their liberties, not repressing their evil propensities." Murder is no part of the system of these dacoits, but their outrages are often attended by murder, while many instances have occurred of excessive cruelty, limbs for instance having been cut off to obtain anklets and armlets. The proceedings against the dacoits had greatly relieved and delighted the villagers, who however had recently been alarmed by acquittals ordered by the Sudder Court. Captain Hervey quotes former reports of his own against any system of colonization, and a report of Colonel Sleeman to the same effect. Dacoits when restored to liberty invariably return to their profession. The women of convicted dacoits almost always prefer to remain with the families of those unconvicted. Captain Hervey appends record of the proceedings of a dacoit durbar attended by thirty-three dacoit approvers. They all, after conviction and imprisonment, went back to their old habits, and admitted that if liberated again they must do as they had always done.

On 1st April, 1856, Captain Hervey reports to the Government of Bombay the result of the operations of 1855. In the early part of that year Lieutenant Schneider had charge of the office, and under that officer 65 dacoits were tried or otherwise disposed of.

"Discharged, ...	7	Dacoits.
Made approver, ...	1	„
Committed for trial in six cases, ...	8	„
Finally sentenced by him as Assistant Magistrate, ...	3	„
Made over to the local authorities, ...	23	„
Deceased before trial,...	1	„
Total,.....	43	„
Under examination when relieved by me, ...	22	„"

82 dacoits were examined during the year of whom

" Released, ...	18
Made approvers, ...	3
Deceased before trial, ...	1
Committed for trial, exclusive of two approvers,	24
Sent to the Extra Assistant General Superintendent at Hyderabad, ...	2
Finally sentenced by the Assistant General Superintendent, ...	3
Made over to the local authorities, ...	29
Total, ...	80
Remaining under investigation on the 31st December, 1855,...	2"

Among the men sentenced were two Mhangs, who turned approvers, and denounced 153 Mhangs in Ahmednuggur. Formerly these Mhangs had been traced in the Sattara country only. Twenty-six dacoities were committed during the year in the districts under the Agency, a decrease of twenty-three on the return of last year. In the twenty-six cases, nine persons were murdered and twenty-four wounded, including 2 dacoits killed and 4 wounded : the plunder was of the value of Rs. 10,140-5-4, " while in seventeen detected instances 320 persons were arrested on suspicion by the local Magistrates; of whom ninety were punished with various limited terms of imprisonment, not exceeding three years (with the exception of two men, who were transported for life in one of the cases *not* attended with murder); 135 were released ; one man died ; and ninety-four remained under investigation at the close of the year." No Kaikarees were implicated in these dacoities. 480 cases of burglary occurred in the Sholapore, Belgaum, and Dharwar Collectorates; a proportion of which were committed by professional dacoits. The value of the property reported was Rs. 30,638-6-3 of which Rs. 7,964-3-8 was recovered. 455 persons were seized on suspicion, and 233 sentenced to various short periods of imprisonment.

An inquiry was instituted into the habits of Bhar robbers, (coiners) in 1854, but although three members of one gang including their leader were convicted, their associates continued the practice, and one gang arrested at Poona had passed Rs. 3,574 coined by themselves in imitation of the chowkoonee or square Rupee. These men were all discharged, as it was necessary that the money so uttered should be counterfeit of the Honorable East India Company's currency, which these Rupees

were not. The coins were ordered to be melted into tin, and sold, the victims to receive the value of the tin coins passed off on them, and the remainder to be carried to the public treasury.

Captain Hervey late in the season moved his establishment into the Tanna district to watch the crowds collected on the Railway works. His opinion of their condition was most favourable, and he believed them all remunerated to a degree which, coupled with an energetic Police, restrained them from crime. An extraordinary number of violent deaths occur in the Tanna zillah every year, and Captain Hervey proceeds to notice the cases of robbery by drugging in Bombay. The cases revealed in 1855 were :—

Belgaum,	4
Dharwar,	3
Sholapore,	3
Sattara,	1
Poona,	3
Ahmednuggur,	3
Nassick,	6
Khandeish,	2
Tanna,	4
Angria's Colaba,	4
Rutnagherry,	0
Surat,	2
Ahmedabad, Broach, Kaira,	0
Southern Muratha States,	0
Sawunt Waree,	1
Kolapore,	2
Akulkote,	2

Of the whole nine persons died, and Captain Hervey submits that Act XXIX. of 1850 should be made general. Captain Hervey recounts the operations of the Agency from 1847 when 334 cases occurred, to 1855 when the number was reduced to twenty-six. Of 609 prisoners seized 354 were sentenced to transportation for life, or periods of imprisonment, 111 were released from insufficient evidence, and the rest variously disposed of, 60 being sent to local officers for precautionary measures. "From the evidence of the approvers, as recorded in their several narratives, it would appear that the number of dacoities the above had committed with them amounted to 1,151, *of which* 1,048 *took place within the limits of the Bombay Presidency.* Of these, a total number of 703 have been authenticated on reference to the local authorities, in which the property plundered by the dacoits was to the extent of Rs. 5,16,659-2-10, whereof to the

value of Rs. 17,209-8-7 only was recovered, while detection seldom followed, notwithstanding the proclamation of rewards on almost every occasion varying from Rs. 50 to Rs. 500." There are 1,277 persons still at large connected according to the approvers with dacoit gangs, and of these 496 are registered dacoits, and the remainder have committed crimes with two or more approvers.

In the appendices Captain Hervey gives the following account of the system of plunder called "Bhar," supported by illustrative cases. "Four or so people to associate together, and one of them, with the assumed appearance of being some important personage, to be given out to be a relative of the Shreemunt Peshwa (Bajeerao), his name so and so. This settled, a copper vessel was procured, and rubbed over with butter-milk and tamarind, in order to get it covered with verdigris, and then it was filled up with earth and stones. One or two ornaments, or some Rupees, or such like, were next placed on the top of all, and the mouth of the vessel closed. It was then to be buried somewhere in the jungles, in a hole dug for the purpose. Two or so men of the gang were then made to appear to be sepoys, and one or two to be horsemen, who were instructed that, when the above vessel should be exhumed and brought away, they were to pretend to be the sepoys of Government, and to pounce upon them all at some certain preconcerted spot, and then only to consent to release all, on a promise of being paid a certain sum of money for doing so. Matters thus arranged, the next step was for the gang to repair to some town or city, where the disguised great personage and pretended horsemen and peons were kept in the back-ground, while the rest, after finding out what rich Sowkar or other person there might be in the place who was covetous of wealth, would, under some pretence or another, strike up an acquaintance with him, and get to be on visiting terms with him. After allowing some convenient time to pass by, it would next be imparted to the said Sowkar, that a quantity of property was known to have been buried in the time of the Shreemunt Peshwa at a certain spot; and that in their company was a person who was formerly either the Peshwa's Dewan, or one of those in His Highness' confidence; and that he used in those days to be a man of consequence, but now was in poor circumstances; and that as it was not likely that any one would be ready to take anything valuable from him but under suspicion of the same having been stolen, and would rather have him taken into custody, would he, the said Sowkar, though being a great man, consent to receive charge of the above buried wealth?—or, if he liked, they would show it to him, and he might dispose of it as he thought proper, and keep half the proceeds for himself,

letting them have but only the other half! Decoyed by such temptations, the man is induced to accompany the men at night to the spot where the vessel has been previously buried; which is then dug out, and opened, and the dupe requested to behold that it is full of wealth!—eager to possess which, he gets beside himself, and requests that all should go back with it at once, or that it be given into the charge of some one of those he may have brought with him. The whole then proceed in a body forthwith with the booty. On the way, the party is intercepted by the pretended sepoys, already told off to that part of the business as above. They request to be told what it is they are carrying away, and arrest their further progress, desiring that it should be shown to them. On this, the cheats whisper to the duped party,—'We are stopped; if we be taken into custody, we shall lose the whole of the property; we must endeavour to prevent this.' The victim assents to this, and he is then advised that nothing short of Rs. 1,000 or Rs. 1,500 would be sufficient to effect their release, or that otherwise the property would be seized, and his own chances of profit too be lost. In his eagerness not to lose so much wealth, he is suffered to go home to produce the amount agreed to, and which he does, either in money, or by its equivalent in such ornaments or other valuables as he may have at hand. Upon this, the vessel is taken to his house, and he carefully puts it away under ground. What has been thus obtained from him in the transaction is then shared among the members of the gang, the chief man of the party getting half of the whole, and the other half being divided among the others, one share of it being kept for *durbar expenses* (*i. e.* to meet disbursements in case of any of their number being seized, with which to procure securities, or to bribe Karkoons, or such like). Such was the plan of proceedings in Bhar imparted to me by Essajee Punt."

On 17th June, 1856, the Government of Bombay enquire of the Sudder Fouzdaree Adalut whether special laws are required to meet cases of "Bhar." The Sudder on 16th July reply in the negative. The crime is conspiracy already punishable by ten years' imprisonment, if the sufferers would only give evidence. That they refuse to assist the existing law is no proof of the necessity of a new one. On 22nd September, 1857, Captain Hervey replies that the crime is evidently *not* punished, that its occurrence is much more frequent than can be ascertained from the returns, that by extending Act XXI. of 1850 to meet the crime approvers might be steadily employed, and that "most of the culprits convicted on a charge under that Act might accordingly *be rendered impotent for future mischief*—a provision not compassed by the ordinary Mofussil law." With

regard to the crime of Bhar robbery, Captain Hervey pleads that the reform required is a change in the law of evidence, adding weight to the testimony of accomplices. In practice the law of the Presidency positively prohibits the reception of testimony from an accomplice. With reference to the reluctance of prosecutors to appear Captain Hervey remarks, that the State does already in many instances appear as prosecutor with regard to false coin. Captain Hervey would make it forgery to coin any money whatever, and quotes a proclamation issued from Teheran, "arising perhaps from some false Persian money having been passed off by some of our camp-followers, who were probably coiners, warning all Persian subjects of what they received from us, as that we could well pretend to pay so handsomely for all we obtained from the country, by making the payment in counterfeit monies; of which, the proclamation declared, several specimens from our camp had reached His Majesty the Shah!"

On 22nd January, 1856, Captain Hervey submitted a report containing a description of the form of dacoity by drugging called in Western India "mawa." No less than 52 cases had come to the writer's notice in 1850-51, in which fifteen persons died. He describes instances and proceeds to advise that Act XXIX. of 1850 be extended all over the presidency. The existing law is inoperative because one criminal only, *viz.* the man who administers the drug, is seen by the victim. On 4th July, 1854, the Sudder Fouzdaree, in answer to a question from Government, dissent from Captain Hervey, and the Government of Bombay concur.

On 23rd November, 1848, Captain Hervey submits to the Government of Bombay a report on the Wandering Tribes of the Southern Muratha Country. Captain Hervey remarks on the extreme difficulty of settling races who are thieves and vagabonds by hereditary profession. The body of Pindarees who were so located in Dharwar are not, he contends, an instance in point, because not essentially wanderers. They were armies collected of the scum of India, and when defeated by the British Government easily settled down into different occupations.

The Lumbances, commonly called Brinjaras, are a very different class. They live ostensibly by carrying salt, in reality by plunder. "Except that, owing to the circumstances of the different countries, their occupations may vary, I think these Lumbances are very much to be compared with the gipsies of Europe. I have never yet been able to learn from any of them as to their real origin; they do not seem to be aware of any circumstance from which they can date it, stating that they have always from generation to generation been 'khana-buh-dosh,'

('house to back'—*i.e.* of no fixed homes). 'Their marriage and other ceremonies differ from other peoples'. Their notions are odd; their religion undefined; they have a peculiar dialect, understood only among themselves, though generally they can fluently talk the language of each tract they visit; they do not intermarry with other people; they live in no fixed abodes, though they will often have their tandas or encampments in a single place for a long time together; they note the stars, take omens, and rigidly observe them; and their singular women would scarcely seem to belong to such men, from their very dissimilar appearance; but whose quaint dresses cannot be attributed to any vanity on their parts, but rather as an index of the tendency of their minds, exhibiting a wildness of air in harmony with the real condition of their habits and feelings. 'As good wives and true, they are as remarkable as the Pindaree females were otherwise."

The Kaikarees, also a distinct tribe, are nominally basket-makers.

The Wuddurs are diggers of wells.

The Pardhees snare game, and on the whole these two classes, though wanderers, may be excluded from the predatory classes.

The Bedurs are expert burglars, but they have settled down in villages. Captain Hervey recommends an increased strictness of surveillance, and particularly power to Magistrates to exact security from all wandering bodies in money: "naming in each district certain villages and towns, where the Police may be tolerably good, at some one of which each tanda must be made to encamp, if purposing to remain any certain time within it, which they must declare, or suffer detention in default of security, or be made to depart as above; and the attaching, the while, an intelligent peon to each tanda, *to be subsisted by it;* giving notice to the neighbouring Police into whose charge it may be about to pass when leaving a district; mustering the men of the tanda, and, in the absence of any man by nightfall or at dawn, exacting from it the amount of any robbery that may have been committed during the night any where within eighteen miles off from the encampment, except it points out the thieves; intimating forthwith to the several local Police authorities the arrival within the district of all such people; mentioning, at the same time, the strength of the tanda, and the name of the naik thereof,—would, I respectfully suggest, be remedial measures, of a precautionary nature, altogether necessary for restraining the present predatory habits of these people; and preferable to permanently locating them in colonies, unless they can be forced, by pressure, to blend with the rest of the commu-

nity." Captain Hervey appends a list of these wandering tribes, with their real and apparent occupations:—

Name.	*Real Occupation.*	*Ostensible.*
Kulkorwees, ...	Dacoits, ...	Musicians.
Morikur-Korwees, ...	Vagabonds, ...	Jugglers.
Huggul-Kaikya-Korwees, ...	Thieves, ...	Female Beggars.
Koonchee-Korwees,	„	Brushmakers.
Oop-Belgar-Korwees,	———	Carriers.
Agadee-Korwees, ...	Robbers, ...	Whoremongers.
Wajjuntree-Korwees,	——— ...	Musicians.
Brinjaras, ...	Dacoits, ...	Carriers.
Wuddurs, ...	Burglars, ...	Navvies.
Guntee-Chors, ...	Pick-pockets, ...	———
Bedurs, ...	———	Village Officers.
Jutts, ...	Thieves, ...	Cultivators.
Chuppur, ...	Coiners, ...	„
Ramoosees, ...	Robbers, ...	Village Watchmen.
Kathkurree, ...	Petty Thieves,	...Catechumakers.
Katorees, ...	Highwaymen, ...	Wood Sellers.
Pardhees, ...	Robbers, ...	..Shikarees.
Bheels, ...	Thieves, ...	Watchmen..
Oochle-Kaikarees, ...	Bazar Thieves,	.. ———
Bamptes, ...	Thieves, ...	..Brahmins.
Bazeegurs, ...	Bale Thieves, ...	Sowkars.
Teen-namees, ...	Thugs, ...	...Gosains.
Gand Biggarees, ...	Thuggee, ...	Drug Sellers.
Mhang-Ramoosees, ...	Burglars, ..	...Watchmen.
Per-Mhangs, ...	Robbers, ...	Ropemakers.
Garodee-Mhangs, ...	„	...Jugglers.
Arre-Madgur-Mhangs,	„	Carriers.
Chutturguttees, ...	Burglars, ...	...Painters.
Dowree-Gosains, ...	Robbers, ...	Gosains
Josees, ...	„	...Fortune Tellers.
Muratha-Bunjarees,	„	Watchmen.
Tukkarees, ...	Burglars, ...	...Makers of Grindstones.
Kolhatees, ...	Dacoits, ...	Jugglers and Prostitutes.
Takinkars, ...	Highwaymen, ..	...Grindstonemakers.
Bhats, ...	Dacoits, ...	Showmen.
Kalbhelas, ...	„	Drug Sellers.
Purdesee-Newatees, ...	Robbers, ...	Sepoys.
Khutboos, ...	———	Putlee Wallas.

Name.	*Real Occupation.*	*Ostensible.*
Waid-Golhs,	———	Drug Dealers.
Khur-Khur-Moondes,	———	Beggars.
Gissarees,	———	Blacksmiths.
Dhowars,	———	Smelters.
Dhasrees,	———	Beggars.
Dombarees,	———	Rope Dancers.
Phansee Pardhees,	———	Shikarees.
Zat-Gahs,	———	Jugglers.
Soorgu-Siddees,	———	,,
Jogees,	Thugs,	Pedlars.
Garodees,	———	Snake Charmers.
Luskurree Seckulgurs,	———	Sheathmakers.
Brinjaras,	———	Carriers.
Chirree-Mars,	Dacoits,	Bird Catchers.
Dukkulwars,	———	Basketmakers.
Punchpotres,	———	Beggars.
Gopalls,	———	Showmen.
Bhonde-Koomars,	———	Statuaries.
Charuns,	Dacoits, (?)	Carriers.
Sir-Bhungees,	,, (?)	Gosains.
Nundee-Wallas,	———	Monkey Showmen.
Bunder Wallas,	———	———
Junglee-Sonars,	———	Smiths.
Bhowre,	———	Beggars.
Parots,	———	Showmen.
Yergolls,	———	Drug Dealers.
Mool-Dhasurs,	———	Self-torturers.
Khunjurs,	———	Coir matmakers.
Chowras,	Robbers,	———
Hurdass,	———	Rhapsodists.
Phailwans,	———	Wrestlers.

MADRAS REVENUE SURVEY.

Madras Records, No LIII.

On 22nd September, Mr. J. D. Bourdillon forwards to the Government of India an extract from the minutes of consultation on the 14th August, 1855. This extract contains a complete and connected exposition of the subject of a revenue survey proposed for Madras.

There has been no survey of Madras although that presiden-

cy, Kurnool excepted, has been under British administration for more than fifty years. Some few attempts at a survey have been made in single districts, but they have been very defective. In most the revenue demand is based only on the statement of the curnum, who may plunder the ryots or defraud the Government. "In Canara it is notorious that during the last sixty years a great extent of waste and forest land has been reclaimed, which is justly liable to pay revenue to Government, but on which there is now no means, in the absence of a survey, to enforce that right. In Nellore again, the land revenue arrangements are in a state of the utmost confusion. The settlements of the first Collector at the beginning of the century were based on no certain data; and they have been so tampered with since, that it is impossible at the present day to say to what class any given piece of land belongs, or what is the proper demand upon it; the only thing certain is that very numerous and extensive frauds have been committed and are now in operation, which only a survey can correct. In the districts of Rajahmundry and Masulipatam, both of which are in process of being brought under the influence of extensive systems of irrigation, there is no accurate information as to either the extent or the productive power of the soil; the assessments are extremely unequal, and in great confusion, while it is certain that frauds are perpetrated with impunity." An accurate survey will remove these evils.

Moreover Government is enormously defrauded in the matter of enams of which there is no registry, though a provision was made for registering them in 1802. Even in districts in some sort surveyed there has never been any attempt to verify titles. "Thus in the single district of Bellary, the lands held wholly or partially free amount to the enormous extent of 1,562,322 acres, bearing an annual assessment of above twenty lacs of Rupees; and in Cuddapah the enam is 1,051,509 acres bearing an assessment of above twenty-one lacs of Rupees. It is notorious that a very large proportion of these enormous rent-free holdings stand on no good title whatever." Government consider investigation into these titles imperative, and believe if it be made with proper consideration for the presumptive interest which has grown up in the enjoyment of half a century, it will not be objected to.

As to the survey, "the Government are decidedly of opinion that the revenue survey should be connected by minor triangulations with the grand trigonometrical survey, by which greater accuracy will be attained, and the work will be made more permanent." It should be a survey for revenue and not topographical purposes, and should show all the principal variations in the surface of the soil, and the size of fields. This

should be done by the English method now employed in Bombay. "As to the size of fields, it is not necessary that the minute sub-divisions prevailing in many villages in the irrigated lands, often less than a quarter or even-one-eighth of an acre, should be separately surveyed. For the purposes of the survey a number of these very small fields may be clubbed into one field, so as to form a convenient plot." The field now sub-divided was once a unit, and was to be registered under that character. The fields should seldom be smaller than one acre of irrigated, and two of unirrigated land. New villages, where land is valuable, may be exempted from this rule. Minor sub-divisions should be shown by dotted lines. In Bombay no field was allowed less than ten acres, but this size would be inadmissible in Madras. The survey should comprise the enam lands, all cultivated land, and such land as seems likely to be taken into cultivation. The jungle and waste-land need not be surveyed in detail. "And as further portions of it shall successively be brought under the plough from time to time, they may be surveyed by the survey establishment which hereafter should form a part of the permanent establishment of every district." Permanent boundary marks, field maps, village maps, and talook maps, are essential.

For assessment the Government recommend ryotwar, which though it may be improved, is greatly in advance of settlement by villages. The improvement will follow naturally under a moderate assessment, which will leave no necessity, except in very rare and special cases for remissions. "Where annual settlements shall be in use, the terms of them will simply vary with the lands held by the ryot, and his use or non-use of water from a Government source. No enquiry will be necessary as to the mode in which he may have cultivated his land or any of it, or whether he has cultivated it at all."

The ryot may take up or relinquish land if he likes, but as a rule, land having under a moderate assessment an exchangeable value, the ryot who has too much land will prefer to sell. The assessment should be liberal, not only because the minute and scientific classification of land is a matter of extreme difficulty, but because liberality, by inducing the ryots to take up waste-land, will yield ultimately the largest increase of revenue. The presidency contains a vast extent of uncultivated land liable to pay if cultivated. "If the settlement be undertaken in this liberal and comprehensive spirit, the preliminary classification of the soil will not be difficult. Under a moderate assessment exact accuracy is immaterial, because the greatest difference of assessment which could be caused by the want of it, would not be such as to render the land an unprofitable holding,

or to prevent its occupation, at the utmost it would only render such land somewhat less profitable than other land. It is the opinion of this Government therefore that the classes should be few, and based on real tangible differences of soil." The classification should note differences of surface-soil and sub-soil, and of productive power. Government would ever consider the practicability of classifying land simply with reference to its productiveness, charging only a rent for water if afforded from a Government source. "Next to the classification of soils will come the valuation of the land. The classification having regard simply to the physical quality and the productive power of the soil, the valuation takes in also the considerations of nearness to the village, and consequent facility of manuring, cultivating and guarding the crop, nearness to a road or a market, facilities of irrigation, and other accidental, rather than inherent, circumstances, whether affecting the value of the crop or its quantity. This may most conveniently be effected, as in Bombay, by placing the field or the village, as the case may be, in a higher or lower class of assessment, according to the aggregate of such circumstances."

As to rate; "the existing rates were based, generally speaking, on an assumed proportion of 50 per cent. of the gross produce in the case of irrigated land, and of 33 per cent. in that of unirrigated, after making certain deductions for village servants' allowances." Certain causes produced great inequality and uncertainty, but in all districts the price of grain has fallen, and the assessment therefore which was originally a commutation of a grain-rent has in fact been raised and the proportion of the crop taken by Government is generally 50 per cent. on irrigated and 35 per cent. on unirrigated land. Sir T. Munro was of opinion that the Government share should not exceed one-third of the gross produce. "But in the Ceded districts, where the assessments were lowered in order to bring them to this proportion, there are still loud complaints of over-assessment; and the state of those districts, of Bellary in particular, is certainly not such as to indicate much wealth or comfort among the people." In the North-West the rule was never to take more than two-thirds of the rent, probably 30 per cent. of the gross produce, but in Mozuffernugger the revenue is only 20¼ per cent. and in Bareilly 22½ per cent. and in Goruckpore 12 per cent. The waste-land also was given for 30 years to the proprietor. On the whole the Governor in Council would recommend 30 per cent. of the gross produce as the maximum demand, with deductions for local circumstances Government would probably obtain 25 per cent. There may however be cesses for local objects in addition. The proportion being fixed, Government would recommend a commutation of

that proportion into money by a commutation to last for seven or ten years, and to be equal to the average price for the previous seven years. "Under this system the assessment of each field would be fixed in terms of so much grain; in the case of irrigated land, (if that distinction is retained in the classification,) paddy would be taken; and in that of dry, one or other of the chief dry grains. At the yearly settlement the total would be computed, and would then be converted into money at the commutation price of the year." To fix the price of grain, markets should be fixed in all chief towns, to be under a trustworthy clerk by whom particulars of sales would be registered. The Marquis of Tweeddale had a very strong opinion on the value of such markets. It is doubtful whether it would be necessary to divide the country by separate official scales of prices.

It would be unadvisable to fix these assessments in perpetuity, but Government would declare them unalterable for fifty years. With respect to the size of holdings the Governor in Council would, for reasons assigned, leave that question to the operation of natural causes. The annual lease now customary might be abolished, the ryot compounding for a fixed term of years. "The composition will be regulated by certain fixed rules as to proportionate deductions for waste, for fallow, for bad seasons, &c.; and the privilege of making such a composition will of course be restricted to holdings of some considerable size."

As to the effect of these measures on the revenue. The present revenue from ryotwar districts amounts to 317 lakhs of Rupees. This revenue is equal to 50 per cent. of the gross produce, and a reduction to 25 per cent. would therefore of itself greatly reduce the revenue, but despite the increase of population there has been little increase of cultivation; "less than one-fifth of the whole area of this presidency is cultivated. The total extent of the ryotwar parts of the country is above seventy-seven millions of acres, of which the cultivation of Government land may be computed at 14,670,000 acres; to this 20 per cent. may be added for enam cultivation, making a total of 17,500,000 acres, and deducting one-third of the remainder for mountains, tanks, roads, &c., there remains the enormous extent of forty millions of acres probably available for cultivation, being nearly three times the present cultivation of Government land.

"Even of the land actually fit for cultivation the extent now waste is very large. The total extent of Government land entered in accounts as 'arable,' is 32,170,000 acres; of this no more than 14½ million acres, as above seen, is cultivated, including enams, leaving nearly 18 million acres waste. There

is no room for doubt that an instant increase of cultivation would follow reductions of the Government tax." Cultivation also is largely concealed, the revenue officials being paid to connive at it. The ultimate recovery of revenue from enams would also be considerable. Moreover the survey must occupy from fifteen to twenty years, and only one-twentieth of the revenue will be dealt with every year. There will therefore be full time for restorative agencies to come into operation. "On the whole, considering the present depressed condition of this presidency, it seems fair to anticipate with confidence that the result of these measures, instead of a falling off, will be an accession to the revenue, while, as respects the payers and the public, the gain will be enormous, the revenue will be derived from resources double or treble those upon which it is levied now; and will be paid with corresponding ease and absence of privation."

The Governor in Council believes it most expedient to carry on the survey on a great scale, and by the most competent agency, and would therefore recommend a Surveyor General, and 4 Deputies, each with charge of a separate geographical division. The department should be arranged on the model of the surveys in Upper India, but the Governor in Council supposes an establishment on the scale sanctioned in South Arcot. The survey will then cost Rs. 1,80,000 a year. As to the total cost, "the total extent to be settled in this presidency has been stated alone at 38 million acres, and supposing the cost to be as much as ten Rupees per hundred acres, the total will be 38,00,000 Rupees. The cost of the survey has already been computed at Rupees 38,40,000; and thus the total of survey and assessment united may be taken at Rupees 76,40,000." This sum distributed over twenty years is equal to only 1½ per cent. on the revenue, and ought to be incurred.

The extract is followed by the report of Mr. W. Elliot on the survey of the Guntoor Tannah submitted on 18th December, 1855, the basis of the applications for a survey, a letter to the Court of Directors, condensing the statements analyzed above, a request for some record from the survey office, Calcutta, and other routine letters.

On 22nd August, 1856, Mr. J. D. Bourdillon, Secretary to the Government of Fort St. George, complains that no answer has been received to the application for a survey, and encloses reports on the condition of the provinces of Rajahmundry and Guntoor. He observes that the new system of irrigation in Rajahmundry, judging from the analogy in Tanjore, ought to produce eight or ten lakhs of Rupees more than the revenue previous to irrigation. It does not, and this sum is lost in a

single year by the absence of a survey. The survey would in fact be paid for by the increased revenue from the Godavery delta alone. The second report on Ganjam from Col. A. Cotton shews the same absence of information, which renders the profits of works of irrigation for which the country offers peculiar facilities uncertain. The Governor in Council trusts these facts will receive due consideration. "It must be remembered however, that the two districts referred to are exceptional in degree only, not in kind; it may even be doubted whether the case of Ganjam, bad as it is, is not exceeded by those of Masulipatam and Nellore; whether a survey is not more urgently required in both the latter districts than in the former." A still more striking case of the effect of inprovement is furnished in South Arcot. "In that district very large reductions in the rates of land assessment were authorized by this Government in 1854, in consequence of proof of the burdensomeness of the existing rates. The reduction averaged as much as 25 per cent. on the wet or irrigated lands, and 33 per cent. on the dry or unirrigated. These measures came into practical operation in the revenue year 1264 (1854-55,) when a sum of above six and a half lacs of Rupees was struck off the demand of the year." The year was one of drought, but the deficit was only one of 1,24,000 Rupees. In the succeeding year the ryots felt the advantage of the change, and the actual collections of the year exceeded any in the previous ten years. The following table shews the precise result of the measures of reduction adopted:—

Statement shewing the Settlement and Collection including that of arrears of all branches of Revenue from Fusly, 1256 to Fusly, 1265 in South Arcot.

Fusly.	Land Revenue.				Extra Sources.				Total.		Remarks.
	Settlement.	Collections within the Fusly.			Settlement.	Collections within the Fusly.			Settlement.	Collections within the Fusly.	
		Current.	Arrear.	Total.		Current.	Arrear.	Total.			
	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	
1256	24,37,544	23,30,674	93,721	24,24,395	4,95,401	4,79,393	3,887	4,83,280	29,32,945	29,07,675	The revision of Assessment came into operation in Fusly, 1264, in which year the following deductions in the settlement were made, exclusive of the road fund.
1257	24,90,747	21,78,014	1,03,434	22,81,448	4,10,912	3,86,136	16,007	4,02,143	29,01,659	26,83,591	
1258	22,30,244	18,72,842	3,01,992	21,74,834	3,87,583	3,52,710	24,660	3,77,370	26,17,827	25,52,204	
1259	18,62,698	16,96,140	3,52,960	20,49,100	4,39,066	4,30,179	34,693	4,64,872	23,01,764	25,13,972	Rs. Ven Hooloos Talooks,..... 6,17,017
1260	23,40,550	21,95,608	1,68,386	23,63,994	5,06,535	4,91,983	8,886	5,00,869	28,47,085	28,64,863	Resumed Jaghire, ... 5,308 Munnargoody, Chellumbrum and Cuddalore, ... 60,050
1261	25,22,928	23,58,640	1,46,351	25,04,991	5,07,064	4,76,551	14,560	4,91,111	30,29,992	29,96,102	6,82,375
1262	24,21,370	23,23,977	1,66,405	24,90,382	4,56,530	4,30,787	30,510	4,61,297	28,77,900	29,51,679	*Deduct.*
1263	20,75,612	18,74,796	96,077	19,70,873	4,34,502	4,05,419	25,588	4,31,007	25,10,114	24,01,880	2d Crop Nunjah teervah brought to Jummah, ... 19,286
1264	19,51,276	17,50,117	1,91,287	19,41,404	4,25,292	3,90,160	23,890	4,19,050	23,76,568	23,60,454	Net amount remitted in Fusly, 1264, ... 6,63,089
1265	24,04,464	22,62,428	2,07,422	24,69,850	5,45,676	5,18,211	34,937	5,53,148	29,50,140	30,22,998	

A correspondence follows upon the possibility of introducing individual settlement into Rajahmundry and Masulipatam based on field assessment only. The Commissioner of the Northern Circars, Mr. Goldingham, held that it was possible. The Governor in Council considers his statements too general, his proposal amounting only to an imperfect survey, which would take forty-six years to complete, and which would entail a permanent loss of Rs. 3,71,000. There would be "an immediate sacrifice of revenue to the extent of 9,30,000 Rupees; against which is to be set off a sum of 1,99,000 Rupees to be gained by the discontinuance of remissions, and further eventual gain of Rupees 3,60,000 by extension of cultivation; leaving a net deficit of 3,71,000 Rupees a year." The Collector and Sub-Collector of Rajahmundry are opposed to the scheme, as the register of the fields is notoriously inaccurate. The Governor in Council is therefore of opinion that nothing short of a radical measure, that is a scientific survey, will suffice to correct the evils prevailing in the newly irrigated districts.

On 16th October, 1856, the Secretary to the Government of India reports that the plan of a survey for Madras has been strongly recommended to the Court of Directors, and that a report has been called for with regard to the details from Major Thuillier, the Deputy Surveyor General of Bengal. The Governor General in Council recommends a consideration of the possibility of allowing the ryots to make themselves "responsible for the revenue of a village for a term of years, and having done so, to reclaim as much of the waste-land of the village as they choose during that term." But "considering the liberal spirit and earnestness with which the Government of Madras have applied themselves to the reform of the revenue system, the reduction of assessment to which they have already given effect, and the results which have followed this reduction, the Governor General in Council is disposed to leave to their discretion, subject to the orders of the Honorable Court, the final disposal of the various questions discussed in connection with the present project. The foregoing observations, therefore, and those contained in the Honorable Mr. Grant's minute, are communicated to the Government of Madras, more with the view of promoting discussion and bringing to bear the experience of the revenue system of other parts of India, than with any intention of controlling the judgment to which the Right Honorable the Governor in Council may ultimately arrive."

On 17th December, 1856, the Court of Directors sanction the general scheme proposed by the Government of Madras. They approve of an investigation into the titles to rent-free lands, but object to fixing the taxation by reference to the gross produce.

It should be fixed on the net produce. This, though it cannot be ascertained with absolute accuracy, may be discovered within reasonable limits by the help of the villagers and the exercise of a sound judgment. They also object to the commutation on the average of seven years. They think that "the grain assessment having been determined and converted into money at a fair and moderate rate, we should prefer that the assessment so fixed should be declared unalterable for a term of thirty years (as in Bombay and the North-West Provinces), at the expiration of which period both the amount of the grain assessment and the rate of its conversion into money, would be subject to re-adjustment according to existing circumstances." They are in favour of prohibiting sub-division beyond a certain limit, the Bombay limit of ten acres being suggested. As to waste-lands they would grant the neighbouring villagers the refusal of them. If they decline the responsibility the lands should be assigned to those who offer to take them. They assent to the views of the Government of Madras as to the financial effect of reduction, but remark:—"It must however be borne in mind that the large augmentation of agricultural produce, which may be expected to ensue on the reduction of the assessment, will, if confined to grain for local consumption and especially if ready means for transporting it to distant markets are not simultaneously provided, probably lead to a considerable decrease in the price, and that the ability of the ryot to pay the lower assessment may be in reality no greater than that which he now possesses under a higher one. It is therefore of the utmost importance that encouragement should be given to the production of sugar, cotton, and other articles suited for exportation." They sanction proposed establishments and deprecate delay.

On 22nd April, 1857, the Government of Madras requests permission to commence operations at once.

On 12th June, the proposed establishment, *viz.* 1 Superintendent of Settlement on Rs. 3,016-10-8, and 1 Surveyor General on Rs. 1,000, was sanctioned by the Government of India.

On 6th May, Major H. L. Thuillier, Deputy Surveyor General, report on the details of the survey which he describes as a scientific system of khusrah measurement, and recommends its connection with the trigonometrical survey of Madras as compiled by Colonel Lambton. He recommends also general or India maps prepared from the field maps and adds:—"Having in view therefore a professional survey of the Bengal stamp, as a very necessary ingredient of the Madras proposed operations, I would counsel the strictest observance as to the mode of establishing and laying down the true meridian, and in preserving the true inclination of the azimuth as conveyed from circuit to circuit.

It may be sufficient for all purposes of revenue, and for the requirements of the Board of Revenue, that a set of a few villages join well together, but generalization and good topographical maps cannot be obtained by such a system; and if any thing beyond the isolated village plan is expected, or deemed requisite for the general purposes of Government, a rigorous prosecution of the professional part of the work must be adopted. In the 10th paragraph of the resolution of the Madras Government, I observe it stated, that talook maps should be prepared, and permanent boundary marks established, without which two securities, the work would, in the opinion of the Government, in a few years be lost." Major Thuillier reminds the Government of Madras of the necessity of an efficient machinery for the demarcation of boundaries moving in advance of the survey.

On 15th July, 1857, the Board of Revenue of Madras recorded in their minutes of consultation certain views referring to objections, orders and requests from the Court of Directors. "I. Para. 13. The Court suggest a *water rate* on all irrigated land, independent of its assessment as unirrigated, instead of the present (and proposed) plan of classifying and assessing lands as either 'irrigated' or 'unirrigated.'

"II. Paras. 15-20. The Court object to an assessment founded on a percentage of the *gross* produce.

"III. Paras. 21-22. The Court object to a periodical revision of the assessment with reference to fluctuations in the price of grain, and consider that it should be fixed for 30 years.

"IV. Paras. 23-27. The Court, with reference to the vast number of minute holdings by individual ryots, suggest the introduction of the Bombay system of 'survey fields,' whereby several adjacent occupiers of small fields, are considered co-sharers of one large field.

"V. Paras. 28, 29, 30. The Court desire that their previous instructions regarding 'meerassee' tenure be not departed from.

"VI. Paras. 31-34. The Court object to the plan for securing 'permanent occupancy' by allowing a reduction of assessment to ryots agreeing to take up large holdings for a term of years.

"VII. Para. 44. The Court consider that the suggestions in the Honorable Mr. Grant's minute referring to the system of assessment in Cuttack should receive careful consideration."

The Board consider the present division into irrigated and unirrigated land the best. The practical difficulties of registering the quantity of water supplied are too great, particularly where the water is drawn from tanks. The rate moreover might press unfairly; "it would constantly happen that lands in different classes, and therefore bearing different rates of pri-

mary assessment, would produce much about the same when irrigated. It does not at all follow that a field of an inferior class of soil would retain that inferiority with regard to another, when both were irrigated."

The Board believe that an assessment on the net produce, as suggested by the Court, is impracticable in a khetwar settlement. Village by village an approximate calculation might be made, but this is impossible field by field, particularly as a ryot when pressed invariably proves himself a loser.

The Board consider the plan of an assessment for thirty years proposed by the Court preferable to the commutation every seven years proposed in the original plan.

The Board are entirely opposed to fixing a mininum holding as likely to create discontent and opposition. They would however carry out the following rules:—"I. Persons desirous of engaging for fresh land will not be permitted to take it except in a quantity comprising not less than a certain area hereafter to be determined on. II. Occupants of petty holdings, when they fall into arrear, shall not be allowed to renew their puttahs. III. No ryot, desirous of contracting his cultivation, shall be allowed to give up so much as would bring his holding within the prescribed limit." They recommend that no puttah should be granted for less than Rs. 10 a year. With reference to Mr. Grant's advice, that the ryot should be allowed to pay his dues annually to some person nominated by themselves, the Board observe:—"Cannot but think Mr. Grant has been misinformed as to the agency employed in the Madras presidency. It is not the duty of a Tahsildar and his people to enter villages for the purpose of making collections of revenue. The fact is that there is in every village a headman, under the name of potail, monigar, mocuddim, &c., holding land of his own, who is recognized by Regulation IV. of 1816 as 'the person who collects the revenue.' It is to him that the ryots pay their instalments when due, and he remits the money to the Tahsildar's cutcherry. The Tahsildar does not interfere, unless there occurs some special difficulty or process to be gone through for the recovery of arrears."

A mass of letters follows, all on technical points, or details of establishment. The establishment recommended on 25th January, 1858, to the Government of India, was as follows:—

"The total annual expenditure that will be required, when the proposed establishments have been raised to their

Abstract.	*Annually.* Rs.
Survey Department, ...	2,41,920
Assessment Department,...	2,56,844
Demarcation Establishment,	39,840
Lithographic Press, ...	9,012
Total per annum, ...	5,47,616

full strength, (which however will not be feasible for some time to come,) is Rs. 5,47,616, as noted in the margin, to be continued for a period of about 14 years, and thus aggregating a total expenditure of Rs. 76,66,624, for the whole work of the survey and settlement of this presidency, for which, in the original sketch estimate, a sum of Rupees 76,40,000 was allowed." The cost per square mile will be "for the survey, including both the 'khusrah' and professional survey, about Rupees 55 per square mile, the original sketch estimate having allowed Rupees 64. For the assessment and settlement of the surveyed area, about Rupees 51, for which Rupees 64 were originally allowed; for the work of the demarcation establishment, including the settlement of disputed boundary questions, about Rupees 10; and for mapping the whole by means of lithography in maps of different scales, according as they are village, talook, or district maps, about Rupees 2 per square mile; for these two last items no allowance was made in the original sketch," or Rs. 18 per square mile. On 10th April, 1858, this outlay was sanctioned on the understanding that the duration of the survey would thereby be reduced from 22 years to fourteen.

SEDASHIGHUR OR BEITKUL HARBOUR.

On 18th October, Colonel C. E. Faber, Chief Engineer in Madras, transmits to the Marine Board, Madras, Lieutenant Taylor's report on the proposed establishment of a harbour of refuge in the Beitkul cove. This report, though unaccompanied by estimates, for which the season was too advanced, is sufficient in Colonel Faber's opinion to afford grounds for an opinion on the general merits of the project

Lieutenant Taylor's report is dated 13th September, 1855. The cove is remarkably smooth and well adapted for a harbour. He proposes a canal of three and a half miles, half of it through natural creeks, break-waters, and other works unintelligible without the plans, which would produce "a harbour of great extent with 21 feet water at its entrance, at the very lowest spring tides (26 to 28 at high water) and with an area of 5 or 6 acres, having 19 and 20 feet, sufficient for several large vessels; the bottom

being soft mud, they would suffer no injury from grounding. The general area of that part of the harbour which has a depth of from 15 to 21 feet at low water, would be upwards of 20 acres, and the bottom nothing but soft mud." He adds:—"Sedashighur bay seems by nature designed for a harbour. We have high-land (Goodhully peak, 1800 feet above the sea) less than three miles to the eastward of Beitkul; Carwar head is 640 feet high, and admirably adapted for the site of a light-house which would be needed; the Oyster rocks, an excellent break-water behind which vessels may anchor on their first arrival; these rocks or islands in their highest part, are 160 feet above the sea, and being so far cut, form excellent land-marks."

On 25th October, Lieutenant G. W. Walker, Civil Engineer, 3rd Division, explains that he is detained from visiting Sedashighur by the necessity of making up the details of the budget, and observes that the first want of such a harbour is accessibility from the interior. Two roads through the Surgawarree and Kyga ghauts to the banks of the Sedashighur are urgently required. The total expenditure necessary will be Rs. 10,500.

On 27th July, 1857, Lieutenant Taylor again reports on all the ports of the Canara and Malabar coasts, on the survey of which he had been engaged from the monsoon of 1855 to April, 1857. Under the advice of Colonel A. Cotton, Lieutenant Taylor expands his project for improving Sedashighur bay, and the harbour of Beitkul. He would recommend two break-waters, one 1000 yards long and one 500, which would make the port a fine one, protected as it is from the south by Carwar head. Carwar head is 650 feet high above the vapoury mist which, rising 100 feet high, veils the outline of the west coast of India. A light of first class brilliancy on the head would be seen 30 miles off. By a canal of 2½ miles from Sinkerry creek to Beitkul, water communication between Malapore and Beitkul will be perfected. This opens 22 miles of water carriage, and Lieutenant Taylor believes the Sedashighur may be made navigable for fifteen miles further. All the rivers of Canara north of Honore may be connected with Beitkul by a small system of canals.

The river already admits vessels of 500 tons in the fine season. "There are no impediments to boat navigation up to Malapore; nearly opposite that place the Singawady ghaut comes down to the river on the right or north bank; on the south bank is the Kyga ghaut; these two roads, when completed, should bring the whole of the Southern Muratha Country cotton and other produce, to Beitkul." The cotton now comes "principally down the Devimunny ghaut to Cutgal, on the north bank of the Tuddree river; thence instead of going by boat to Tuddree, it is carried in carts up a hill again, and then down to the Munky ferry,

about 2½ miles from Coomta town; the carts, bullocks, and cotton are then carried across the stream, a breadth of 300 yards, when the carts being reloaded proceed onwards to Coomta. Some carts come down the Arbyle ghaut, but the ferry on the Gungavelly river between Sooksaul and Goondabaly, which is fordable for only six or seven months of the year, is a great drawback." The Gungavelly river from the ferry to its mouth is navigable all the year round, and should be connected with the Tuddree by a canal which would not cost a quarter of a lakh. Mr. Taylor enters into further details, by which three ghauts could be connected with Tuddree, and explains that by these and some other small works, and a small port-light, Tuddree would be so improved that the mere duty on grain would repay expenses. The works required are:—"1stly. The Gungavelly and Tuddree canal. 2ndly. A wharf wall and a few small improvements at Cutgal. 3rdly. Bringing the Neelcoond road on to the river above Ooperpatnum, where also should be a wharf. 4thly. A wharf at the spot where the Arbyle ghaut comes down upon the Gungavelly. 5thly. A small light-house on Tuddree hill. 6thly. Two buoys to mark Tuddree bar. 7thly. The groin at the entrance of Tuddree river." The merchants are turning their attention to Tuddree. "Tuddree is the port to which the attention of merchants is now turned, two or three screws are now ready to press the cotton bales, and vessels of 300 or 400 tons will be able to load from a pier and sail direct to England." The saving in shipping cotton from Tuddree is 5 per cent. and in linseed 6 per cent.

Honore. Nothing needed.

Coondapore. A place of considerable trade wants a fourth light, and from Coondapore to Mangalore a few short cuttings between the back-waters would create a continuous coast canal.

Mangalore. The river is moving gradually northward. Efforts have been made to prevent this process. Mr. Taylor reviews them all, and decides in favour of letting the river cut its own way, till it reaches a mass of rock called Sultan's battery, which will supply a natural barrier without any charge at all.

On 4th March, Col. A. Cotton, Commandant of Engineers, submits a memorandun on Beitkul, observing "water-carriage, and that alone, can carry the mass of produce at a remunerative rate of charge from the interior to the coast. The charge by the Madras Railway is now 10 pice (1¼ *d.*) per ton per mile, at which rate a ton of goods would cost 20 Rupees to convey it from the centre of Bellary to the coast, a cost which would prevent a railway from touching the great traffic of the country. It might convey 20 or 30,000 tons of cotton, indigo, &c., but the

500,000 or million of tons of grain, timber, stone, lime, fuel, &c., that ought to be moved, would, as now, be immoveable; but a charge of 1 pie (½*d.*) per ton would reduce the cost to two Rupees, at which almost any thing could be conveyed." Col. Cotton states that in considering the propriety of improving any port, it is necessary to consider also the character and capacity of the country to which it is an outlet. Col. Cotton had the advantage of advice on the commercial capacity of these regions from Mr. Bryce, an intelligent merchant, on revenue questions from Mr. Bourdillon, and on naval points from Lieut. Taylor. The great peculiarity, he remarks, of the western coast, is the existence of a great natural barrier stretching from Cape Comorin to the Nerbudda, distant only between ten and forty miles from the coast, and varying from 2000 to 8000 feet in height. There are three trenches in this barrier—one at the mouth of the Nerbudda, one at Sedishaghur and the third and most complete breach at Poonany. From the Taptee to Beitkul in particular the ghauts form an unbroken wall. "In this respect Bombay is most unhappily situated, having quite close behind it a perfect wall 1,800 feet high, the disadvantage of which no work can ever counteract, except in a very partial manner. This is demonstrated by the fact that £800,000 is now being spent in conveying a railway up them, and if we add to this 10 lacs of interest during the five years that it is under construction, and 30 lacs paid for 30 miles that the railway is carried out of a direct line to get to the ghaut, we have 120 lacs, the mere interest of which on so large a traffic as 100,000 tons, and 1,00,000 passengers, would be per head and per ton three Rupees, the cost of conveying a ton of goods 1,400 miles by sea, and probably 1,000 by good internal water communication; besides the cost of working the ghaut and the other 30 miles. This enormous sum of money being sunk, the interest of it must be paid, and thus must remain an irremediable and serious check to trade on that line, and it will be more and more felt as the interior is opened out by lines of navigation. Such is a specimen of what we must lose when we attempt to work against nature instead of with her." The level of the country is a material point as effecting the introduction of European energy. "The country at the back of the ghauts has this great advantage. Up the Nerbudda and the Taptee you must go some hundreds of miles from the coast to get on a high level; at Poonany, by going inland about 100 miles, you get upon the table-land of Coimbatore, 1,300 feet above the sea, and where, consequently, for most of the year, there is a very fine temperature for Europeans; but from Sedashighur you soon get into a country from 2 to 3,000 feet above the sea, which in that latitude forms a climate for Eu-

ropeans far superior to that of England." The whole of these countries are feeble and well supplied with exportable articles. As to the coast, the further south the greater the protection against the south-west moonsoon. "It most materially affects this question that most of the rivers of the Kistna basin, the Toombuddra, the Kistna, the Beema, the Seena, &c., have a very moderate fall, from one to two feet per mile almost up to their sources, that is, to very near the ghauts, so that the whole of them can easily be made effective navigations. This is a most important fact, and is indeed one of the great leading features of this tract of country. Probably 2,000 miles of internal navigation may thus be obtained at an insignificant price." There is also every facility for a coast canal from Comorin to Beitkul at a very moderate cost. This canal will communicate with all the rivers named, and so connect every village with each other and the ports. "North of Beitkul, all the way to Bombay, I am informed that the country is impracticable for a coast canal, but a late Chief Engineer of Bombay assured me, that it was quite practicable to connect the Taptee and Nerbudda with Bombay harbour by a canal, and thus give Bombay unbroken internal water communication with the basins of those rivers." From Capt. Taylor's report Colonel Cotton believes the harbour to possess the following advantages:—"1st. There is a large space with ample depth for ordinary merchant-vessels now sheltered from the south-west monsoon.

"2nd. There is an inner cove with 15 feet and under, almost completely land-locked.

"3rd. There is partial shelter from the North-west gales, (which are very heavy sometimes,) by the two small islands lying off the mouth of the river. These islands must greatly break the sea that rolls into the harbour during those gales.

"4th. The anchoring-ground is good.

"5th. There is a cluster of islets outside, nearly enclosing an anchorage with seven fathoms, which might easily be made into a perfect shelter by a small extent of break-water, if such an addition to the accommodations of the port should afterwards be considered necessary.

"6th. A cut of two or three miles through flat ground will bring boats from the Sedashighur river (the Kala nuddee) into the harbour, without their being exposed to the sea.

"7th. A canal can also be cut through the low bund that closes the bottom of the cove and carried on along the coast, thus terminating the coast-canal also in the harbour. This must indeed be effected by carrying a loose, stone break-water outside two headlands, for a length of about 1½ miles, but the water is not deep, material is at hand, and the expense will not be excessive.

"8th. Carwar head, which forms the harbour, is a fine lofty head-land and a good sea-mark, and will allow of a light-house being placed at a great height above the sea.

"9th. Ample materials are on the spot for any extent of break-water, as I should think, a Rupee a ton at the utmost.

"10th. There is both flat and elevated ground for building to any extent.

"11th. The cove has not filled up at all in the memory of man.

"12th. This place is remarkable for being the coolest on the coast, owing perhaps to its being opposite to the opening in the ghauts.

"13th. There is a hill 1,800 feet high, up to which a road with a slope of 1 in 12 might be made, making the distance four miles. This is a very important addition to the advantages of the place, opening the way for the residence of the families of the Europeans connected with the port, in a temperate climate, and affording an immediate relief to invalids.

"14th. The place is most free of access in all weathers.

"15th. The only danger is, the cluster of islets above mentioned, the outermost of which is about 2¼ miles off Carwar head, but this is not a serious drawback, as they are high rocks, and a light-house may be placed on them.

"16th. The harbour is capable of improvement literally to any extent, at a moderate cost. By carrying out a break-water from Carwar head, as shewn in the plan, a most extensive anchorage may be sheltered, a great part of which will be just like a dock. If carried out 1,000 yards in 4½ fathoms, it will contain about half a million tons of stone, costing five lacs, but this may be done by degrees, as an increased extent of shelter is required. It would be quite sufficient to carry it on at the rate of a quarter of a lac of Rupees a year. This shelter may be further improved by connecting the two islands off the mouth of the river, where the depth is at most 24 feet; this, as it might be very low, would take only about 40,000 tons, and cost 40,000 Rupees, and a further addition might be made by carrying out a short break-water almost South-west from the point of the outer island, at an expense of one lac. It is evident, then, that the harbour may be completely land-locked at a comparatively unimportant expense.

"17th. By blasting the rock and throwing it over into the sea from the inner end of the Carwar head break-water to the cove, and along the sides of the cove, a fine extent of wharf may be formed, on which warehouses may be built and along side of which vessels may lie.

"18th. One of the most remarkable things connected with this

harbour, is, that no river falls into it, so that it will have an advantage that scarcely any other harbour has, connection with the interior by water without any of the evils arising from currents, silt, &c. Upon the whole, I think we may safely say there is scarcely a harbour in the world that has a more remarkable collection of advantages than this would have, considering."

Colonel Cotton would commence at once :—"1st. The construction of a first class light-house on Carwar head. A small one has been ordered, but I would urge that it would be a great pity to spend time and money on any thing now that would not be in accordance with the other improvements, and which would consequently soon have to be altered.

"2nd. The cutting of the canal from the river to the harbour.

"3rd. The forming the canal from the harbour to the southward as far as the Tuddree river.

"4th. The commencement of the breakwater from Carwar head.

"5th. The connection of the two islands by a break-water.

"6th. Blasting the rock to form a roadway, wharf, &c. along the face of Carwar head near the cove."

This could cost 5,10,000. He would ultimately spend 4½ lakhs more on Carwar break-water. He would then unite all the rivers with each other and the port by a system of canals, and by crossing about four of the ghauts by roads with light rails laid on them. The total expense would, he estimates, be :—

	Lakhs.
"Improvement of 2,000 miles of river navigation at 1,000 Rupees a mile, ...	20
Canal from the Kala nuddee to the Toombuddra, 120 miles at 30,000 Rs.	36
Canara coast canal, 180 miles at 6,000 Rupees, ...	11
Four ghauts, ...	1
Detail works connected with irrigation of ½ million acres at 6 Rupees per acre, ...	30
Works at Beitkul before enumerated, ...	5
Total,	103

Or, £ 1,003,000"

The result of the operation would be "as respects the people, the change would be just the same as we see in this district of Rajahmundry, where there is now full employment for all at about 50 per cent. higher wages than there was before, so that the relief to the mass of the people is

really complete, and the change here is as great in all other respects. This year about 27 lacs of revenue were collected with perfect ease, 40 per cent. more than the average before the works paid with great difficulty. The traffic on the main canals in the past year was 13,000 boats, averaging about ten tons each, besides rafts, in all, about 1,50,000 tons, against 1000 boats averaging about five tons, or with rafts, perhaps in all, a traffic of 10,000 tons six years ago.

"Exports and imports to the value of 25 lakhs against an average of 10 lakhs of which 2½ lakhs was imported grain, the latter showing not the wealth, but the poverty of the district at that time. Lastly, a large import of bullion instead of a constant export. The land to which water is now led is about seven lakhs of acres, and as a water tax is now being levied of from two to four Rupees per acre, and they are allowed the water free for two years, in the 3rd year from this time, about 20 lakhs of *direct* additional revenue will be levied in this one delta, *one-fifth of the whole deficiency in the finances of India.* This is besides increase of cultivation, which is very extensive, and increase of extra revenue from the improved condition of the people.

"The extension of this irrigation is going on rapidly, and the same in the delta of the Kistna, so that we have ample grounds for concluding that these two deltas will within a few years yield an increase of revenue equal to the whole present deficiency in the finances, of one million. Again by many different sources of information, we find that the increase of produce in these irrigated lands is certainly above 15 Rupees an acre over the former produce in one crop-land, so that in these seven lakhs of acres there will be an increased value of produce of 100 lakhs, or one million sterling, besides a second crop on 2 or 300,000 acres.

"Does it not seem strange that the question should still be asked, in a despairing tone, what can be done to correct the finances? If it is asked, but if there is so much land watered in Rajahmundry now, how is it that the revenue has not increased still more rapidly (the works having been begun in 1845)? The answer is simply, because the revenue officers *would not collect it.* There are literally thousands of acres of land that have yet paid no water rate, that have had the water for eleven years, and several hundred thousands that have had it from one to five years.

"It is only now, that in consequence of peremptory orders from Government, the water rate is being regularly levied, but in the meantime at least half a million pounds sterling of revenue has been lost through the grievous neglect or obstinacy of those

whose duty it was to collect it. But still, notwithstanding this extraordinary hindrance, there has been collected since the works were commenced in 1845, about 60 lakhs in this delta, more than there would have been in the average of former years, and that, not only without any increased burthen to the people, but with a relief equal in amount to much more than the whole former revenue.

"The total cost of these improvements, up to the end of last working season, was about 30 lakhs."

On 28th May, 1858, the Government of Madras decide that Col. A. Cotton's report and that of Lieutenant Taylor shall be printed, and mention that a company has been formed in England to facilitate measures for opening Sedashighur harbour.

AJMERE AND MAIRWARA.

North-West Provinces' Records, Part XXXII.

On the 24th July, 1858, the Officiating Deputy Commissioner of Ajmere reported to the Officiating Commissioner the result of his tour through Ajmere and Mairwara. There had been a superfluity of rain during the monsoon; the fall was 23 inches, or 8 above the average. The tanks were overflowed, the roads flooded, and the khurreef crop an entire failure. The rubbee harvest was plentiful, especially where the soil had not suffered from saline exudation. This causes a vast extent of ground to lie waste so that the expanse is not broken save by the bunds of the tanks which are planted with babool and other trees, the produce of the sale of which will go far to cover the expense of the repair of the bunds. Owing to the drought of 1848 and the consequent death of thousands of animals, there is a deficiency of horned cattle which interferes with the agricultural operations of the villagers. The only manure obtainable is the deposit in the tulaos. The little cow-dung procurable is made into cakes, 40 of which sell for an Anna. In the year the fields are manured "the highest produce of barley, in the very best lands irrigated from tulaos, will be about 1,750 lbs. to the acre;—the next year the crop will perhaps run as high as 2,000 lbs.;—whereas the third year it will fall to 1,500, when the manure will be again applied."

In the Ajmere district Indian corn is sown only in places where it can be watered, and as it is an early crop, it is succeeded by wheat or barley. Cotton is extensively sown in Mairwara.

"It is planted very early, before the rains have the power of injuring the young plants, and so that it may be picked before the frosts set in. It is sometimes, but rarely, irrigated, the moisture near the beds of the tanks being quite sufficient to bring it to maturity."

To the south the crops are richer and the poppy begins to be cultivated. In Todgurh the land revenue collected is less than 1 lakh, whilst the value of the raw poppy juice was not less than 3 lakhs of Rupees. It is cultivated by the poorer Mairs. In the west and north the land is held on a byacharee tenure. The cultivators are kept in a state of poverty, partly by the high assessment and partly by the action of the Civil Courts, in which the bunyas obtain decrees against them and enforce them by dustucks in punchayuts, against which the ignorant Mairs do not dare to appeal. "The new Mairwara regiment, by drawing away population, has also thinned the villages, whilst the sepoy cultivators object to pay their leases."

The sepoys care nothing about their fields where the settlement is not light. The Putwarees' books and village records were carefully examined. They were mere copies of the original settlement papers and hence every cultivator considered his revenue as an unvarying sum. "The office of Putwaree is sought only to enable the holder, as banker, to receive the whole crop of the ryot, in payment of his own debts. The revenue falls into arrears, and is only credited when the Putwaree has sold the crop at an advance, whilst, very frequently, dustucks are issued in the village for the sum detained by the Putwaree." The Putwaree is generally the only man of the village who can read and write, and hence it is almost impossible to supercede him. But the Mairs are eager for instruction. The remuneration of few Putwarees will henceforth be under 60 Rs. a year, while the average will be Rs. 100 a year.

Earthen bunds were at first used for the tulaos in Ajmere but the soil had no consistency and gave way. It was therefore necessary to strengthen them with masonry. In Mairwara, Colonel Dixon had constructed many embankments, and as he received only Rs. 50,000 for the purpose, he expended it so as to bring the quickest return to the revenue. In Ajmere he afterwards built more noble and substantial works. "After the front wall without foundation had been built to support the earth, a waste weir was added; and, subsequently, as the rain, acting on the earthen bund in rear of the wall, dissolved it, a rear wall became necessary, thus retaining the earth of the bund between two walls. To prevent the action of the waves acting on the bottom of the front wall, and percolating below it, by which many of the tulaos are emptied before their contents can be brought into use

for irrigation, a foundation or plinth had to be added." In the Rajgurh pergunnah at the village of Neearah he built a bund thus described:—"It is a very beautiful, massive, and substantial piece of masonry, thrown across the Dhye river, a tributary of the Bunas, and a considerable stream at this spot. The lake formed is a noble and deep sheet of water, covering 600 acres, and the land irrigated in its rear extends for a distance of two square miles, in one luxuriant sheet of the richest cultivation. By its percolation, the water in the river is maintained at a high level in the channel below, enabling numerous other villages belonging to Istumrar Thakoors, to reap the fruits of a more bountiful supply of the precious element than they ever before received. Excluding those works constructed by the sovereigns of Meywar at prodigal outlays, this bund and lake may rank with the best works in India, and they will remain for ages, lasting monuments of the beneficence of Government and the benevolence of their constructor." Owing to the construction of no less than 45 bunds and weirs, some of them of large dimensions, Meywar, formerly a "wild jungle," is now "one mass of the richest cultivation." Hence the Mairs have themselves undertaken the construction of bunds unaided by Government. The following is a list of tanks in each pergunnah which received repair :—

Purgunnahs.	No. of Tanks requiring repair.	Grant from Tulao Fund.			From Zemindars.			Total.		
Ajmere, ...	7	739	13	4	256	6	4	996	3	8
Rajgurh,...	6	1,479	0	11	949	0	0	2,428	0	11
Ramsur, ...	24	1,213	9	3	972	0	6	2,185	9	9
Beaur, ...	33	3,316	0	8	587	6	0	3,903	6	8
Saroth, ...	7	754	12	0	754	12	0	1,509	8	0
Todgurh, ...	23	1,024	3	6	1,024	3	6	2,048	7	9
Total, Co.'s Rs. ...		8,527	7	8	4,543	12	4	13,071	4	0

It is recommended that a bund and channel to supply the Ramsur tank at an expense of Rs. 15,000 be constructed. "The high road from Nusseerabad to Deesa, between Nya Nugger and the plains of Marwar at Bur, which winds along a pass through the

Aravullee hills, had been much improved and widened." The digging of wells is most important. At present well land pays a higher revenue than *tulabee* or that irrigated from tulaos. While the former has greater certainty, the mode of cultivation from it is more expensive. The outstanding tuccavee advances are large, and the remission of Rs. 1,069-6-6 is asked for as irrecoverable. Owing to the failure of crops the cold weather kists could not be met. Remissions are also "required on account of the land submerged by the water in the tulaos, and which are assessed at high rates. Though the tulaos, in bad seasons, prevent a total failure of the crops, and save the population from the miseries of famine, yet in seasons in which there has been more than the usual fall of rain, they are so filled, that their beds do not appear at all above the surface of the water, or else appear too late, to enable the owners of the land to cultivate them." The average assessment per acre as fixed by the settlement is as follows:—

Name of Districts.	Irrigated land; acres.	Average rate per acre on Irrigated land,	Average rate on cultivation.
Ajmere, ...	24,351	4 12 0	2 1 3
„ Mairwara, ...	13,026	4 4 0	2 7 6
Marwar, „	1,142	5 2 0	2 15 2
Meywar, „	8,255	7 8 0	5 0 11

The prices of the principal grains in Ajmere and Nya Nuggur have fallen 50 per cent. below what they were for the three years preceding the settlement. Hence the present money assessment falls heavy upon the ryots.

The Governor General, in reviewing this report, notices with satisfaction the improved condition of the people in the vicinity of the embanked lakes, directs the subject of the action of the Civil Courts to be referred to in future reports, approves of the salaries given to Putwarees, and requires further information on the proposal for the new work to feed the Ramsur lake. He declines to grant permission to strike off the settlement all such lands as are liable to constant submersion, as not in

accordance with the principles of Colonel Dixon's settlement, the basis of which is that it is made by the village and not by the field or ryot. Villages, portions of which have become unproductive from submersion, have otherwise benefited by the lakes. There must be no measure of direct individual relief which would tend to weaken the joint responsibility of the village. But if the Government demand on a whole village is disproportionately heavy, a summary re-settlement should be made.

TRANSPORT OF TROOPS.

Parliamentary Papers.

A SELECT Committee of the House of Commons was appointed on the 8th of February, 1858, "to enquire into the measures that were resorted to or available, and the lines af communication adopted, for re-inforcing our army during the revolt in India. They looked upon the inquiry as divided into three branches; "the first, relating to the overland route to India; the second, to the employment of steamers, as compared with sailing vessels, for the transport of troops round the Cape of Good Hope; and the third, to the use made during the mutiny of the military resources of this country and of the colonies."

The Court of Directors, from the first recommended the overland route, but political and other considerations deterred the ministry from assenting to it. These political considerations ceased to prevail "in the first week of September, when the more serious character of the war and the lateness of the season for ships departing for Calcutta, led to a formal requisition from the Court of Directors, and to a compliance with it on the part of the Cabinet."

The overland route might have been resorted to at an earlier date, and may always be advantageously employed in times of emergency. But it should not be relied on as the ordinary route for the transmission of troops to India. Had steamers been used in greater numbers for the Cape route, reinforcements would have reached India more speedily, but such were not attainable, nor had they been so, would the supply of coal on the route have been sufficient. In all future cases of emergency steamers should be used, but they are too costly for ordinary use. The committee decided that "the Governors of Ceylon and the Mauritius gave early and valuable assistance to the Government of India, and deserve great praise for the zeal and promptitude with which they acted; that the Governor of the Cape,

without loss of time, forwarded treasure and horses, together with a portion of the troops at his disposal. but that he did not send the whole amount of the force which he was instructed by the Home Government to transmit to India; that the committee have not the means of judging whether the circumstances of the colony did or did not justify Sir George Grey in taking this course."

They express their satisfaction with the proofs of loyalty given by the people of Canada, and come to the conclusion that, on the whole, "great credit is due to the Court of Directors of the East India Company for the promptitude and efficiency with which they discharged the difficult task of transmitting reinforcements to the army in India during the past year." The following witnesses were examined :—Mr. Philip Melville, Mr. Mason, Captain Shepherd, Mr. Lumsden, Captain Harris, Mr. Mangles, Mr. Mead, Admiral Sir H. Leake, Admiral Milne, Captain Hoseason, the Right Honourable Vernon Smith, Sir Allan Macnab, Sir Henry Storks, the Right Honourable H. Labouchere, Sir Frederick Currie, Sir George Clerk, Captain Engledue, Mr. Allan, Mr. Hertslet and Mr. Beatson. In submitting the minutes of the evidence and documentary statements, and the results of their investigation, the committee point out "1st. What measures appear to have been resorted to, in order rapidly to reinforce our army in India.

"2d. What might in some specified instances have been preferably adopted, with a view to accelerate the transmission of those reinforcements."

Preceding Incidents. The first telegram of the symptoms of a mutinous spirit was received on the 9th April. It gave rise to much anxiety in the public mind. On the 19th May the Minister for War stated in the House of Lords, and on the 11th June the Minister stated in the House of Commons, that there was no reason for alarm. But on the 14th April, the Secretary at War recommended a permanent increase of two Queen's regiments of infantry for India, and in the latter part of the same month, the Court of Directors applied for four. On 2nd May, the Commander-in-Chief was asked to send out four regiments, and on the 21st May the War Department expressed their opinion strongly that the regiments "ought not to be despatched later than 20th June." But Mr. Melville stated that until the news of the outbreak at Meerut "no anxiety as to the insufficiency of British troops prevailed 'on the part of the Governor-General,' nor 'in the Court of Directors.' That the communication made by Lord Canning was so 'satisfactory that no serious anxiety was entertained.' The Director, Captain Shepherd, corroborates Mr. Melville."

Meerut, Delhi. On the 27th June a telegram of the events of the 10th and 11th May at these places reached London. "Including 4,000 European troops then detached to Persia, the British portion of our Eastern army was then between 8,000 and 9,000 below its establishment. Over a line of 1,500 miles, from Calcutta to Peshawur, our utterly unprepared and isolated detachments, being in a few days outnumbered everywhere by unexpected foes, were placed in unparalleled difficulties."

Time was all important. Every hour of the retention of Delhi by our troops imperilled our dominion. Sir H. Lawrence, Sir J. Lawrence, Lord Elphinstone, all telegraphed to Lord Canning—the last that he should have authority to "despatch a fast steamer to Suez, to convey, to the Home Government, as early as possible, the disastrous news from Delhi. This suggestion the Governor-General did not deem it necessary to accede to.—Mr. Melville, the Military Secretary of the East India Company, estimates the time thus lost in transmitting the intelligence at about 10 days, 'not more.'"

Lord Elgin at once agreed to divert several regiments to Calcutta, repaired to it himself, and sent the *Shannon, Sans Pareil, Himalaya, Assurance, Assistance, Simoom,* a body of marines, and a brigade of artillery.

Ceylon and the Mauritius. Within 6 hours after his receipt of the requisition, Sir Henry Ward "had despatched from Ceylon to India nearly all the force within the colony, retaining less than 300 British bayonets to maintain order in a population of one million seven hundred thousand.

"The praiseworthy promptitude of Governor Sir James Higginson was similarly displayed, by likewise almost denuding the Mauritius of its garrison. Never since its conquest, in 1810, was it left with so small a military defence."

Lest Ceylon should be in any danger the Home Government directed one regiment to be despatched to it, but this also Sir Henry Ward sent on to Calcutta. The Governor of Réunion wrote to the Governor of the Mauritius offering assistance, as the relief of French troops happened to place a large number at his disposal at that time. As there was so fear of a rising among the coolies in Mauritius the offer was gratefully declined.

The Cape of Good Hope. "According to the last colonial statistical tables presented to Parliament (for 1855), we find that the male white population of British South Africa, including Natal, numbered (British and Dutch) but 60,336; with a coloured population (Fingos and Hottentots) but little more numerous. The adults, therefore, of European origin, may perhaps be estimated at one-fourth, or about 15,000."

The Cape is nearer to Calcutta than England is by 7,200 miles, and had a 'seasoned' force at its disposal, of all ranks, of 13,216 men including colonial mounted Police corps. As all danger of a Kaffir war was removed by the prostration of the tribes, owing to the ravages of the '*lung*' disease among their cattle, the colony had no need for regular troops. The Government, on the 25th of August, 1857, proposed to receive in South Africa 10,000 sepoys with their wives and families at the expense of the Indian treasury. On June 29th, (1857) the Secretary for the Colonies directed the Governor of the Cape to despatch a regiment of infantry to Calcutta, on July 14th to Ceylon, and again on 26th August six regiments to India. On February 5th, 1858, no accounts had reached the colonial office that more than four regiments of infantry numbering 2,560, had been sent, leaving in the Cape, nine of infantry, one of cavalry, besides artillery and engineers. On 29th June and 8th July, Lord Elphinstone addressed an earnest entreaty to the Governor of the Cape to send reinforcements: still there was delay. "It was under those circumstances that 'Her Majesty's (late) Government thought it right to point out,' 'discrepancies' and 'conflicting statements' in the representations from the Cape relative to the Kaffirs, and as to the reasons assigned for placing the German legionary settlers on 'full pay and field allowances,' 'although there was no enemy in the field, nor any present apprehension of such an enemy:' and though there were then in the colony 'no less than ten British regiments, besides the Cape mounted rifles.'"

Hence the Select Committee express their opinion, "that of the 13,000 efficient troops of all ranks at the Cape, besides numerous volunteer corps, 9,000 or 10,000 men might, and ought to, have been spared for reinforcing the army in India. This assumes that a portion of the most favoured of all military corps (the German legionaries) would have been willing to participate in field duty. Even if the larger number (10,000) were despatched, there might have still remained a German regiment of 800, Cape mounted rifles 1,084, foot and mounted Police 1300, total 3,184, besides the organized volunteers; altogether an ample force for the totally improbable eventuality of any operations against the wretched remains of the Kaffir people."

The conduct of the Governor of the Cape strangely contrast with that of the Governor of Ceylon, the Mauritius, and Malta —the last during the Crimean war.

Canada "is increasing in population and resources, very much more rapidly than the United States, or any other portion of that continent. This, and the other less considerable provinces of British North America, now contain a population of 3,000,000,—which was about that of the United States, when

they successfully contended with and threw off the yoke of England. This noble dependency is evidently destined to become at no distant period a powerful State."

The loyalty of Canada is remarkable, arising from the fact of the United Empire loyalists having left their property in the United States, and accepted grants of land from the Crown in Upper Canada, rather than forfeit their allegiance; and also from the number of half-pay officers and their families settled in it. The French descendants are, according to Sir Allan Macnab, equally loyal, hence the Canadians want the English army to be opened to them. "On the arrival of the eventful accounts from, the East, there were in Canada and the adjoining provinces no very considerable body of troops. But not only was the immediate withdrawal of the chief portion of them cordially concurred in by the authorities and population of that colony,—but the spontaneous offers to raise Canadian regiments in aid of the parent state, made during the Crimean war, were now again transmitted, in a similar spirit of patriotism."

Steam or Sailing Vessels for Transport of Troops? A cause assigned for failure in our war with the United States was the distance—3,000 miles—over which England had to send her reinforcements. The distance over which our regiments have to be sent to India may in round numbers (according to past arrangements) be calculated at 14,000 miles. This distance increases the difficulty of the war. Hitherto sailing vessels had alone been used for transports, and up to the 10th of July, of the 31 vessels taken nearly the whole were sailors. From 10th July to 1st December, of the 59 ships taken up, 29 were screw steamers. From these data we learn that from England to Calcutta there is a difference in favour of steamers of 34 days, to Madras of 41 days, to Bombay of 42 days, and to Kurrachee of 37 days.

"Average of the whole of the 19 passages by steamers to the four ports of India, ...	83 days.
"Average of passages of 43 sailing ships, ..	120 days.
"Difference between averages of steam and sailing vessels, ...	37 days."

At first the expense for steamers was treble that for sailing ships, but it gradually diminished after the first pressure. It appears from an official return dated 27th February, 1858, that "27 steamers carried to the four ports of disembarkation in India, 14,144 men; averaging therefore 548 men in each ship. That in 55 sailing ships were conveyed 16,231 men; averaging 289

men in each. Now by the same official statement of averages, it appears that the 14,144 men conveyed on steamers, arrived at their destinations on an average of 37 days sooner than the 16,234 men embarked on sailing ships."

The Overland Route. The Committee attribute no importance or even reality to the political reasons assigned by the Government against the use of this route in the emergency. The plea of the unhealthiness of the route is not borne out by the evidence. On the 19th September permission was given for detachments to be passed over Egypt. "The first detachment of 200 men embarked at Malta on the 1st of October, and arrived at Aden in 12 days.

"'Above four months elapses before 281 men of the first regiment (the 69th foot) were sent by this line; they embarked at Plymouth on the 11th of November, and arrived at Madras in 34 days, being less than half the time of the swiftest passage round the Cape. The 94th regiment embarked from Plymouth on the 8th December, and arrived at Kurrachee in 37 days. The 863 officers and men of this corps were conveyed from Plymouth to Alexandria on the Peninsular and Oriental Company's ship *Albeona;* from Suez to Kurrachee on the steamer *Oriental.* The 71st foot, 861 officers and men, proceeded from Malta on Her Majesty's ships *Vulture,* and *Princess Royal,* —arrived at Bombay, 1st wing in 18 days,—2d wing in 16 days."'

The Governor General assumed that the route would be used for troops, and the Emperor of the French and Sultan offered every facility. None of the witnesses against the use of the route had ever been in Egypt or in the Red sea during the summer months, while there are numerous and concurrent testimonies in favour of it from 'persons of most extensive local and practical experience.' From them we learn the following facts:—"The first detachment of the 57th regiment proceeded from Malta to Aden in plain clothes, as ordered from home. The Pacha said 'he did not wish anything of the kind, that they might march through with their arms. He turned into ridicule the idea of our sending them in plain clothes.' The arms, accoutrements, and kits of the men were packed in arm-chests adapted to the purpose, but not exceeding 200 lbs. the case. The whole journey (of this detachment), deducting stoppage and certain accidental detentions, was completed from Alexandria to Suez in 17 hours. 'The arrangements made for giving the troops two meals *en route* were excellent.' 'The men were provided with one day's cooked provisions in the haversacks, in case of need.' 'The railway is capable of carrying any number of men, the viceroy frequently being accompanied in his excursions through

the country by 5,000 troops at a time.'" The Peninsular and Oriental Company "has latterly charged 10*l.* per man to Calcutta, all expenses of every description included therein. The Pacha of Egypt charges the company 5*l.* per soldier and 10*l.* per officer, for the use of his railway across Egypt, and for the use of his carriages. The Pacha's ordinary charge for passengers is 10*l.* There are particular charges for different kinds of mercantile commodities. Gold, silver and jewellery form a very large portion of them. The duties levied by the Pacha on silver and gold is 7*s.* 6*d.* per cent. During the last year there were forwarded by the Company through Egypt at least a million and a half sterling of silver per month.—The duty payable therefore, last year, to the Pacha on silver alone, must have been about 76,000*l.* The additional transit charge would probably have carried this payment on silver to above 100,000*l.*—Ladies and children pass at all seasons of the year. The Peninsular Company receive from the Government for assisting to forward the mails over 200,000*l.* a year. The Company have 45 steam ships, ranging from 2,600 tons to 700. About two-thirds of these ships are in the Eastern seas, one-third on this side of Egypt. The 10th dragoons, in 1854, were a little troublesome at Cairo, but nothing of that sort has occurred since."

Colonel Phipps, who served under Sir David Baird, wrote to the Committee:—"The question was solved when a large force under Sir David Baird proceeded from India in the year 1801, and landed at Kosseir in May and June; crossed in nine days the desert to Kheric, on the Nile; proceeded down that river, garrisoned Alexandria; and in the following year, 1802, several regiments returned to India by Suez and the Red sea, in the month of June. That force, amounting to 5,000 men, consisted of a troop of horse artillery, six guns, some field batteries, a troop of dragoons, and several regiments of infantry. They had with them guns and small arms, ammunition, camp equipage, baggage, and 126 chests of treasure. The troops generally were very healthy. The march across the Suez desert from the Lake of Pilgrims, near Grand Cairo, to Suez, was performed in four days with the greatest ease; marching by night and encamping during the day. In June the ships proceeded to India, the wind at that season blowing down the Red sea. They made a very quick passage." In a report on this route as a means of transport Colonel Pocklington, the Deputy Quarter-master-General says:—"During six months' experience (autumn, winter, and early spring) of the overland route, I am not prepared to mention a single disadvantage this line possesses, as a medium of transport for troops to re-inforce Her Majesty's army in India. Three months elapsed before

detachments were sent by this line, and nearly four months elapsed before we availed ourselves of it for a regiment of infantry." In the summer of 1854, the 10thand 12th dragoons (1,400 horses, 1,600 men) passed through Egypt from India for the Crimea in the hot months. So healthy were they, and so efficient throughout the Crimea campaign, that Lord Dalhousie directed this route to be strictly adhered to in the event of any further transit.

"The internal means of transport after disembarkation of troops is noticed. Much difficulty and delay occurred in forwarding the troops to Allahabad, Cawnpore, and Lucknow. It is said to have taken a month to push forward 3,000 men by detachments to Allahabad. The reinforcements, therefore, usually joined the army by driblets. Six little steamers are mentioned as having been got ready to assist these movements, but of so small locomotive power as to be unable to tow against the stream. There are in India some thousand miles of river navigation, the Indus, the Ganges, and some of their principal tributaries, being of course the most important. Such as these are doubtless the best natural highways of all countries. The great towns, many of which are strategic posts, are almost invariably on the banks of rivers. To navigate the majority of them effectively, steamers, ought not to draw more than two feet of water." The Committee urge that our ships of war should assist to transport troops in time of war on both strategical and economical grounds. 'About nine millions sterling was the charge for hired transports in the Crimean war. If the lower deck guns be taken out, Admiral Sir H. Leeke does not see why 'troops being on board should upset the crew of a well-disciplined man-of-war. Looking to the necessity for increased reinforcements for the British army in India, and the fact that troops who make the long voyage by the Cape are generally, for three or four months, *hors de combat*, they 'earnestly recommend that "all regiments for reliefs or augmentation of our eastern army, be henceforth sent overland, from England, Gibraltar, or Malta.' " Detachments of recruits not urgently required might proceed by the long sea voyage. By the overland route "from Malta to Bombay or Kurrachee, the distance is reduced to 4,000 miles; to Calcutta about 5,700. In respect to the power of promptly throwing in military succours for all eastern contingencies, the Malta and Egypt line secures, therefore, an advantage, in point of distance, of from 8,500 to 10,000 miles. It has been very idle to talk of the influence of other powers, on this matter, over the Pacha of Egypt. That Pacha is an acknowledged hereditary viceroy, scarcely more than nominally recognising the suzerainty of the Porte. The Viceroy reaps a revenue, direct

or indirect, from English mercantile and passenger traffic, of perhaps above 200,000*l.* per annum; a profit greatly to be increased by the continuance of what is now proposed; and herein is a sure guarantee for the enduring good will towards England of the ruler of Egypt."

The Committee conclude by expressing their admiration at the constancy and heroism of the British in India, and at the acts of the Chief Commissioner of the Punjab. They condemn the Naval Department for its declared inability to afford any assistance, and say:—"Of the Secretary of State for War, whose duties would seem above all others to have been concerned, no proof, we regret to say, has been adduced, to enable us to offer, on this occasion, any expression of our acknowledgment of commensurate or energetic interposition by that department, in the matters under consideration."

MR. DALZELL'S REVIEW OF MR. PLOWDEN'S BOMBAY SALT REPORT.

Bombay Records, No. XLVIII.—New Series.

Mr. Plowden visited Bombay in March, 1854 to acquire a knowledge of the system in operation there of manufacturing salt, with a view to the expediency of introducing something similar into Bengal. Not restricting himself to this enquiry, he entered on a history of the salt excise in Bombay, and arrived at the following gloomy conclusions:—"1*st.*—That extensive smuggling *must* be supposed.

"2*nd.*—That the deliveries of salt have declined in the ten years succeeding the increase of duty from eight to twelve Annas.

"3*rd.*—That the population *must* have progressively increased.

"4*th.*—That the control has been lax; and, finally, that he knows not whether it is the enhancement of the duty or the extensive smuggling that is the cause of the decreased consumption of salt.

"The final impression which Mr. Plowden leaves on the mind of the reader is, that unless 'the revenue exhibit a marked improvement, it will be necessary to reduce the tax on salt to the old rate of eight Annas per maund.'"

The object of Mr. Dalzell's review is "to show, and that with the same data and facts as were furnished to Mr. Plowden, that his views are erroneous and unfounded, and that his conclusions are not such as a careful and attentive study of facts

and figures ought to have led him to adopt." The Government of Bombay, in passing a resolution on Mr. Dalzell's paper, hold that he has satisfactorily established his position, and thus summarise his reasoning. "The inference that a decline in the deliveries of salt had occurred was arrived at by the Honorable the Court of Directors in 1847, and was based on the fact that, whereas in the years 1842-43 and 1843-44 (being the two last years in which the excise was assessed at eight (8) Annas per maund), the deliveries averaged 29,66,215 maunds; the average for the next three years amounted only to 23,55,450 maunds.

"Mr. Dalzell points out that the deliveries, during the two years 1842-43 and 1843-44, were greatly in excess of the average of the years immediately preceding. He shows that while the realisations from excise duty, during the years above cited, averaged about Rupees eighteen lacs and fifty thousand (18,50,000); the realisations during the three years preceding averaged only about Rupees fourteen lacs (14,00,000). The average of the whole six years from the first introduction of the salt excise in the year 1838-39 to the time of its enhancement from eight (8) to twelve (12) Annas per maund in 1844-45 was about Rupees fifteen lacs and fifty thousand (15,50,000).

"Mr. Dalzell states that the sudden increase in 1842-43 and 1843-44 was owing to the prevalence of a rumour that the rate of salt excise was about to be increased. It is notorious that such a rumour was in circulation at the period, and it is obvious that it would naturally lead dealers to anticipate the operation of the tax by accumulating as much salt in their stores as possible, before the new tax was imposed.

"The increased run on the salt pans must necessarily have been followed by a reaction so soon as the enhanced duty was imposed, and it is clear that admitting a large surplus stock to have been in the dealers' hands, falling off in deliveries would not necessarily indicate a falling off in consumption or an increase of smuggling. It cannot be denied that there was such a falling off, but if the total deliveries of five years, embracing the two years of extraordinary demand previous to the enhancement of the duty, and the three of decline which succeeded that event, be taken, it will be found that the average of those five years considerably exceeds the average deliveries of the years preceding those in which the expected increase of duty disturbed and increased the natural demand.

"The following approximate result is stated in Mr. Dalzell's 53rd paragraph:—

"Average deliveries for consumption in the	*Maunds.*
Interior from 1838-39 to 1841-42, ...	22,70,119
1842-43 to 1846-47, ...	28,59,263
1847-48 to 1852-53,...	28,80,416
To the above averages may be added,	
that for the years 1853-54 to 1855-56, ...	28,56,189

"It is evident, from the above statement, that there has been a considerable increase in the deliveries since the introduction of the enhanced duty, and it follows that the fears, which originated from a comparison of the realisations of 1842-43 and 1843-44 with those of 1844-45, 1845-46 and 1846-47 were groundless.

"Mr. Plowden, however he may have been misled on this particular point—did not incautiously advocate an immediate reversion to the old rate of duty. He merely suggested that it might be advisable to revert to that duty if no improvement were observable in future; but the future to which he looked has clearly proved that no such reversion is called for."

The Government, considering that Mr. Dalzell's observations should have been forwarded through the head of the Department in which he is an Assistant, forward them for the remarks of Commissioner of Customs, Salt and Opium. Mr. Spooner, the Commissioner, gives information as to "what has been the result of the salt excise duty of 8 Annas as per Act XXVII. of 1837, and of the 12 Anna duty as per Act XVI. of 1844 respectively."

From 1839 to 1844, the close of the eight Anna duty, the average quantity of salt taken for interior consumption was Indian maunds 28,25,210 per year. "For the first three years of the 12 Anna duty, the average quantity of salt taken for Interior consumption was Indian maunds 23,55,454 per year. The average of the total period from 1839-40 to 1846-47, *viz.* five years of the eight Anna duty, and the first three years of the 12 Anna duty, gives an average of Indian maunds 26,86,552 per year. For the next six years, *viz.* up to 1852-53, being the last year mentioned by Mr. Plowden, the average is Indian maunds 27,39,535 per year."

If to the above the years 1853-54 to 1857-58 be added, the average is 29,12,263 Indian maunds per year. The conclusion to which the Commissioner comes is "that the revenue collections are, on the whole, satisfactory; that there is nothing to show that the increased excise of 12 Annas has diminished the consumption of salt by the population, and that, therefore, there is no necessity whatever, at the present at least, to reduce the excise to the old rate of eight Annas."

For the first period of five years *viz.* 1839-40 to 1843-44 "during the eight Anna duty, the average annual collections amounted to Rs. 15,86,125, and for the subsequent periods the realisations were as follows:—

"2nd period of five years from 1844-45 to 1848-49 Rs. 22,37,153
3rd „ „ „ „ 1849-50 to 1853-54 „ 23,86,596
4th „ „ „ „ 1854-55 to 1857-58 „ 26,27,639

STATEMENT *showing the total Salt Excise Revenue from* 1839-40 *to* 1857-58.

Years.	Revenue on Salt exported to Malabar.	Revenue on Salt exported to Calcutta.	Revenue on Salt removed for consumption in the Interior.	Total Revenue.	Remarks.
1.	2	3	4	5	6
	Rupees.	Rupees.	Rupees.	Rupees.	
1839-40	17,114	71,493	13,47,354	14,35,961	
1840-41	20,118	44,242	14,04,370	14,68,730	
1841-42	23,826	29,890	14,73,565	15,27,281	Average. Rs. 15,86,125
1842-43	34,895	1,99,520	14,65,832	17,00,247	
1843-44	17,924	2,80,905	14,99,575	17,98,404	
1844-45	24,372	3,81,689	17,26,200	21,32 261	
1845-46	40,784	3,40,248	18,60,195	22,41,227	
1846-47	31,488	3,00,188	16,13,665	19,45,341	Ditto. Rs. 22,37,153
1847-48	34,701	3,26,946	22,40,511	26,02,158	
1848-49	27,771	3,06,330	19,30,677	22,64,778	
1849-50	32,052	3,87,588	19,42,740	23,62,380	
1850-51	37,697	3,61,056	19,24,276	23,23,029	
1851-52	24,765	3,08,353	20,69,774	24,02,892	Ditto. Rs. 23,86,596
1852-53	35,678	3,05,022	21,24,871	24,65,571	
1853-54	46,093	2,84,712	20,48,301	23,79,106	
1854-55	34,586	4,35,953	19,34,455	24,04,994	"
1855-56	30,775	3,44,243	23,72,771	27,47,789	Ditto. Rs. 26,27,639
1856-57	29,004	2,89,062	22,22,928	25,40,994	
1857-58	38,444	5,74,308	22,04,025	28,16,777	

EAST INDIAN RAILWAYS—SUNDAY TRAINS.

Parliamentary Papers.

On the 24th June, 1858, the House of Commons called for a copy "of all the CORRESPONDENCE that has taken place between the Court of Directors, or any of the Local Governments of *India*, and any of the Indian Railway Companies, on the subject of running TRAINS on the LORD'S DAY"

In Bengal the subject was first raised by Mr. Roche, the Traffic Manager of the East Indian Railway. He proposed on 10th September, 1855, to run a Sunday excursion train weekly from Howrah to Burdwan. The Government of India, looking forward to the time when ordinary trains on Sunday would be necessary, saw no necessity meanwhile for encouraging Sunday excursion trains. On 15th October, 1856, the Court of Directors thought it better "to avoid interference in this matter unless called on by public feeling."

In Madras, Major T. A. Jenkins, the Agent and Manager of the Madras Railway, addressed the Consulting Engineer for Railways on the 17th of January, 1857, proposing that on account of the annual festival at Trivellore, a special train should be run on Sunday, the 25th instant, and asking for the sanction of Government. The Consulting Engineer, after communicating with Colonel Baker as to the practice in Bengal, answered:—"I consider the Saturday evening train will answer every purpose at present (specially as that day is being commonly observed as a half-holiday) for those who wish to visit Trivellore on the Sunday; and I should regret to see the practice of running Sunday excursion trains introduced."

The Madras Government, however, sanctioned the Agent's request to run a special Sunday train on account of the Trivellore feast, and the train ran accordingly on Sunday evening, the 25th January, 1857.

On the 3rd December, 1856, the Court of Directors had forwarded a despatch to the Madras Government in which they state that they "consider it to be impolitic and inconsistent with the spirit of the contract to interfere in a question of such detail as that of running special or extra trains."

The Agent of the Madras Railway was accordingly informed on the 31st January, 1857, that he might run special or extra trains whenever circumstances appeared to require it, but that he should furnish the Government with a monthly statement of the details of such trains. They added:—"It is to be understood that this does not extend to running of Sunday excursion trains,

which it seems, from the letter of the Government of India of 4th November, 1856, No. 5158, are not allowed to be run on the East Indian Railway."

In replying to the Court's despatch on the 24th February, 1857, the Madras Government stated that they had solicited instructions from the Government of India as to "whether special or extra trains were to be allowed to be run on Sunday for the conveyance of the native community on the occasion of Hindoo and Mahomedan festivals, or similar observances occurring on that day."

The opinions of the members of the Madras Government on the Court's despatch dated 3rd December, 1856, are given. Lord Harris says:—"It so happens that the first application received from the Agent, after the arrival of the despatch, but previous to its substance being communicated to him, for permission to run a special train, was to enable him to employ one on Sunday, in order to convey natives to celebrate a Hindoo festival.

"The Government of India have forbidden the running of excursion trains on a Sunday; and after giving the subject my best consideration, it seems to me more than questionable whether special trains should be permitted on that day for the above-mentioned purpose.

"I am aware that it may be argued, that if it is wrong to sanction trains for such a purpose on Sundays, it is equally so to allow the practice on any other day.

"But I do not, after due deliberation, view the question in this light.

"The Government of this country, I conceive, as does the Government of England, professes to belong to the Christian religion, and mainly to that portion of the Christian Church of which the doctrines, rites, and ceremonies are embodied in those of the Church of England.

"That Church keeps the first day of the week as a holy day, as well as a day of rest.

"It can hardly be considered as a suitable manner of keeping a day holy, or making it one of rest, to work trains on it for the special purpose of giving facilities to heathenism and idolatry.

"This view of the matter does not appear to have occurred to the railway authorities, or they, probably, would not have applied for the permission.

"But as the railway is under the direction of Government, it does appear to me to render it liable to the charge of inconsistency of principle, even in the eyes of the natives themselves, if it allows such traffic to be carried out on Sundays.

"It may be said that though the railway has been established

and is directed by a Christian Government, yet that it is maintained chiefly for the use of the people of this country.

"This is true, and there is strength in the remark; but it is not to be so at the sacrifice of any principle on the part of Government."

He expresses the belief that it will be found, on enquiry, that a very small percentage of the persons attending the festival will travel by rail, the fares being too high to meet their pecuniary means. The Honorable Sir H. C. Montgomery, Bart. while not disposed to place any restriction on the freest use of the railway to the people of the country on their festival days, thinks "that it is desirable that the orders of the Supreme Government should be taken, whether occasionally, when these festivals fall on a Sunday, their prohibition against ordinary excursion trains on that day is to include all such extra trains as that which conveyed passengers on Sunday last to the annual feast at Trivellore."

The Honorable Walter Elliot is "of opinion that the Government is bound to prevent the running of Sunday trains on a railway under its control, due provision being made for the conveyance of the mails, and for objects of absolute necessity.

"And this not merely because it professes to be a Christian Government;

"But because it has deliberately pledged itself to a specific line of policy; whereas, in the case under consideration, the required concession is intended to subserve the interests of the Hindoo religion."

Moreover Government has separated itself from all connexion with the religious observances of the country, and the concession of special Sunday trains would, in the eyes of the natives, evince a desire to promote their religion; the closing of all public offices on Sunday, will lead the natives to resort to scenes of festivity on that day, and the demand for Sunday trains will become constant; finally the railway servants, who are, and must be, for a long time, chiefly Englishmen, will be deprived of rest, on that, which is, to all other classes, the day of rest. On the 25th of October, 1856, the Chief Secretary to the Madras Government applied to the Government of India for information as to the practice in Bengal with respect to the running on Sundays of extra trains, such as are required on native festivals. Colonel Baker replied that in Bengal no application for the running of special trains on account of native festivals had yet been received, but that the Government of India had declined to sanction a Sunday excursion train.

In answer to the minutes of the Government of Madras on their former despatch, No. 36 of 1856, the Court of Directors, in a despatch dated 24th June, 1857, write that "an unnecessary

aspect" had been given to the whole question, by introducing the Sunday element into it. They say:—"We cannot but regret that the question should have been allowed by you to assume the proportions exhibited in the papers before us, and that it should have been in any way mixed up with the religious creeds or rites of the native community. If the object for which the special train was required had been illegal, or one likely to be attended with results dangerous to the public peace, there would have been reason for denying it, without reference to the day; but since the purpose in view was in no way inconsistent with the laws of the country or the usages of the people, it would, we think, have been better to have avoided any expression or acts which could be construed into a desire to obstruct the performance of religious rites and ceremonies by the natives.

"The question should, in our opinion, have been regarded simply as one for the discretion of the railway officers, in which it was most inexpedient for the Government to interfere. As, however, you have applied to the Government of India, and they have quoted you their example as to the East Indian Railway, we shall not rescind the application of a similar rule to the Madras Railway, which will, we trust, set at rest the question which has arisen."

MADRAS DEWANEE UDAWLUT REPORT

For 1857.

This report, which is dated 14th September, 1858, gives the following statement of civil cases depending on 1st January, and instituted during the year:—

Before Punchayets, ...	100
Village Moonsiffs, ...	26,280
District Moonsiffs, ...	1,46,357
Sudder Ameens, ...	4,363
Principal Sudder Ameens, ...	2,748
Assistant Judges, ...	664
Subordinate Judges, ...	2,488
Civil Judges, ...	10,462
Sudder Adawlut, ...	,, 176

Of the whole there were:—

"Decided on merits, ...	46,888
Dismissed on default, ...	11,609
Adjusted or withdrawn, ...	61,178
Otherwise disposed of, ...	2,312
Depending 31st December, ...	57,646

Decided by European Judges, ...	819
Do. Native do.	1,21,118
Do. Punchayets, ...	50
Total decided, ...	1,21,987"

The suits were:—

" Connected with Land Rent, and Revenue,	11,217
Otherwise connected with Land, ...	...
For Houses or other fixed property, ...	2,647
Connected with debts, wages, &c., ...	1,12,093
Do. do. Caste, Religion, &c., ...	...
Do. do. Indigo, Sugar, Silk, &c.,	...
Total, ...	1,25,957"

The average duration of suits was:—

1857.	Years.	Months.	Days.
" Sudder Udawlut, ...	0	3	5
Civil Judges, ...	1	3	27
Subordinate Judges,...	1	5	22
Assistant Judge,...	2	6	10
Principal Sudder Ameens, ...	1	1	20
Sudder Amcens,...	0	5	14
District Moonsiffs, ...	0	7	17"

The value of suits depending before the Sudder Adawlut was Rs. 6,83,482 and before all other Courts 1,39,68,910. Rs. 15,62,589 were also depending in appeal.

CASES IN MADRAS POLICE OFFICES

For 1857.

On the 25th of June, 1858, Colonel J. C. Boulderson, the Commissioner of Police, reports on the work done by the Madras Police during 1857. The number of cases disposed of is 16,168, of which only 70 were committed for trial to the Sessions in the Supreme Court. None of the cases so disposed of, need special notice. Notwithstanding the excitement caused by the events of

the year, crime of a heinous nature had not increased. "There is an increase of 4,030 cases in 1857, as compared with the previous year 1856; there is also an increase in the number of persons tried by 843, and the proportion of convictions is nearly three-fourths."

The mortality return exhibits an increase over 1856 of 1,063 cases, the total number being 9,445. Supposing the population of Madras to be 7,50,000 the average number of deaths is 1¼ per cent. being ⅛ per cent. in excess of the previous year. This average is too low. The Coroner's report shews 175 inquests, being an increase of 7 in 1856. There were six deaths from shark bites, two from snake bites, one from exposure to cold, and fifteen from cholera. There were 1373 cases of charges against the Police of which 377 were dismissed.

101 idiots and 21 paupers had been sent to the Monegar Choultry.

General Statement of Cases summarily disposed of by the Magistrates and those committed for trial to the Criminal Quarterly Sessions in Her Majesty's Supreme Court of Judicature in Madras from the Royapett, Town, and Vepery Police Courts during the year 1857.

Charges.	Number of cases.	Number of persons sentenced to death.	Number of persons transported.	Number of persons sentenced to hard labor.	Number of persons convicted and imprisoned.	Number of persons flogged.	Number of persons fined.	Number of persons dismissed from the service.	Number of persons acquitted or dismissed.	Number of persons sent on board.	Total number of persons.	Remarks.
Murder,	2	...	7	...	...	...	...	...	...	...	7	
Manslaughter,	2	...	...	1	...	..	...	...	1	...	2	
Burglary,..	10	...	8	1	...	...	...	...	2	...	11	
Administering poisonous substance with intent to kill,	1	...	...	...	...	...	...	...	1	...	1	
Shooting with intent to murder,	1	...	1	...	...	...	...	...	...	...	1	
Cutting and wounding with intent to murder,	7	...	3	...	...	...	...	...	1	...	4	
Rape,	1	...	...	...	...	...	...	...	1	...	1	
Perjury,	3	...	...	...	...	...	...	...	4	...	4	
Sodomy,	1	...	...	...	2	...	...	...	...	...	2	
Agravated assault,	10	...	...	5	1	1	3	...	2	...	12	
Assault,	4,557	...	..	22	...	2	1,095	1	3,070	...	4,190	
Embezzlement or breach of trust,	107	...	...	22	...	1	1	...	90	...	114	
Aiding or abetting in assault cases,	1	...	...	...	...	...	...	...	4	...	4	
Carried forward,	4,703	...	19	51	3	4	1,099	1	3,176	...	4,353	

General Statement, &c. (Continued.)

Charges.	Number of cases.	Number of persons sentenced to death.	Number of persons transported.	Number of persons sentenced to hard labor.	Number of persons convicted and imprisoned.	Number of persons flogged.	Number of persons fined.	Number of persons dismissed from the service.	Number of persons acquitted or dismissed.	Number of persons sent on board.	Total number of persons.	Remarks.
Brought forward, ...	4,703	...	19	51	3	4	1,099	1	3,176	...	4,353	
Larceny under 50 Rupees, ...	1,012	...	...	396	...	256	9	...	673	...	1,334	
Larceny, ...	30	...	5	23	14	...	...	...	22	...	64	
Accessaries, ...	...	...	...	...	...	...	...	...	2	...	2	
Stealing from the person, ...	4	...	2	...	1	...	...	...	2	...	5	
Attempting to steal property under 50 Rupees, ...	13	..	...	8	...	...	...	...	5	...	13	
.. to obtain property by false pretences under 50 Rupees, ...	89	...	...	36	...	2	1	...	70	..	109	
Stealing growing plants and vegetables, ...	20	...	...	...	...	4	6	...	20	...	30	
Reputed thieves, ...	49	...	...	30	...	...	...	...	52	...	82	
Unlawful or malicious destruction of property, ...	88	...	...	1	...	1	21	...	72	..	85	
Uttering counterfeit coin, ...	3	...	...	2	...	...	...	...	1	...	3	
Abduction or unlawfully detaining a woman or female child, ...	34	...	...	3	...	...	2	...	39	..	44	
Threatening to assault, ...	2	...	...	...	...	...	...	...	3	...	5	
Mutinous or disorderly conduct, ...	1	...	...	...	...	...	...	...	4	...	4	
Affixing placards, ...	3	...	...	1	..	...	...	...	4	...	5	
Found in possession of stolen property without satisfactorily accounting for the same, ...	113	...	...	30	...	1	21	...	102	..	154	

Trespass into dwelling houses without satisfactory excuse, ...												
public ground, ...	306	...	...	1	...	1	100	...	315	...	417	
Attempting to do some bodily harm or injury, ...	1	...	...	...	...	...	...	...	1	...	1	
,, to commit suicide, ...	1	...	...	...	...	...	...	...	1	...	1	
Receiving stolen property, ...	70	...	1	18	2	4	...	...	77	...	102	
Assaulting or resisting Police Officers in the execution of their duty, ...	205	...	...	10	...	...	207	...	108	...	323	
Taking forcible possession of property, ...	3	...	...	...	...	...	...	...	3	...	3	
Wrongful appropriation of property found, ...	5	...	...	4	...	...	...	...	4	...	8	
Continued wilful disobedience to lawful commands, ...	15	...	...	37	...	...	...	...	1	1	39	
Refusing to go on board and to proceed on voyage, ...	6	...	...	13	...	...	...	...	4	5	22	
Continued wilful neglect of duty, ...	2	...	...	2	...	...	...	...	...	...	2	
Secreting themselves on board without the knowledge of the master, ...	1	...	...	3	...	...	...	...	...	...	3	
Breach of the Peace, riotous behaviour, &c., ...	2,895	...	...	19	...	5	3,583	...	2,054	...	5,661	
Disturbing religious ceremonies, ...	5	...	...	...	...	...	4	...	2	...	6	
Gambling, ...	157	...	...	4	...	4	209	...	178	...	395	
Keeping gaming houses, ...	8	...	...	1	...	...	8	...	1	...	10	
,, Brothels, ...	6	...	...	...	...	...	...	...	13	...	13	
Wilful disobedience to lawful commands, ...	13	...	...	16	...	...	...	...	5	1	22	
Refusing to maintain wife and children, ...	434	...	...	3	...	...	114	...	160	...	280	
Having in possession false and deficient weights and measures,	49	...	...	...	...	...	28	...	26	...	54	
Drunkenness, ...	815	...	...	2	...	...	847	5	180	...	1,034	
Riding or driving furiously along the public roads and without lights, ...	611	...	...	...	...	1	568	...	159	...	728	
Playing country music without a license, ...	50	...	...	...	...	...	65	...	34	...	99	
Obstructing the public roads, ...	473	...	...	...	...	...	316	...	362	...	678	
Begging in the public roads, ...	2	...	...	1	...	...	...	...	1	...	2	
Corruption by Police Officers, ...	21	...	...	...	...	...	3	3	18	...	24	
Suit for wages, ...	1	...	...	...	...	...	...	...	1	...	1	
Carried forward, ...	12,319	...	27	715	20	283	7,211	9	7,964	7	16,236	

General Statement, &c. (Continued.)

Charges.	Number of cases.	Number of persons sentenced to death.	Number of persons transported.	Number of persons sentenced to hard labor.	Number of persons convicted and imprisoned.	Number of persons flogged.	Number of persons fined.	Number of persons dismissed from the service.	Number of persons acquitted or dismissed.	Number of persons sent on board.	Total number of persons.	Remarks.
Brought forward, ...	12,319	..	27	715	20	283	7,211	9	7,964	7	16,236	
Owners failing to have boats in readiness without a reasonable excuse, ...	10	...	...	...	...	...	...	...	21	...	21	
Landing grain beyond the special limits, ...	4	...	...	...	...	...	4	...	2	...	6	
Using boats without a license, ...	2	...	...	...	...	...	...	...	3	...	3	
Overloading, ...	3	...	...	...	...	...	4	...	2	...	6	
Misdemeanor, ...	37	...	...	...	...	...	18	3	20	...	41	
Disobedience, ...	21	...	...	...	...	...	8	...	13	...	21	
Contempt in the Police Office, ...	1	...	...	...	...	...	...	...	1	...	1	
Wilful neglect of duty, ...	11	...	...	...	...	17	...	...	9	...	26	
Neglect of duty, ...	1,124	...	...	...	...	...	894	8	305	...	1,207	
Refusing to work, ...	5	...	...	1	...	...	...	...	15	13	29	
Desertion, ...	71	...	...	40	...	32	1	...	91	2	166	
Allowing prisoners to escape, ...	7	...	...	...	...	...	3	...	4	...	7	
Discharging guns or fire works in or near public Streets, ...	17	...	...	...	...	...	10	...	16	...	26	
Nuisance, ...	1,824	...	...	...	...	32	2,137	...	458	...	2,627	
Taking spirits into the barracks or jails,...	8	...	..	2	...	...	4	...	4	...	10	
Purchasing regimental clothing from soldiers, ...	4	...	...	...	...	...	2	...	3	...	5	

Poisoning cattle, ...	1	...	...	...	...	...	...	...	1	...	1
Keeping taverns, &c., without license from the Commissioner of Police, ...	29	...	...	...	...	...	10	...	24	...	34
Breaches of such license, ...	12	...	...	...	...	...	8	...	4	...	12
Absconding by Apprentices, ...	1	...	...	1	...	...	...	...	...	...	1
Affixing paper upon a wall without permission of the owner,...	1	...	...	...	...	...	...	...	1	...	1
Illtreating animals, ...	50	...	...	...	...	1	31	...	10	...	42
Leaving carts, &c., without controul, ...	20	...	...	...	...	...	12	...	9	...	21
Letting loose fierce animals, ...	2	...	..	...	...	...	1	...	1	...	2
Breach of the Abkarry Act, No. XIX. of 1852, ...	30	...	...	...	...	...	23	...	18	...	41
,, of the Post Office Act, ,, XVII. of 1858, ...	1	...	...	...	...	...	...	...	1	...	1
,, of the Railway Act, ,, XVIII. of 1855, ...	8	...	...	1	...	...	6	...	2	...	9
,, of the Conservancy Act, ,, XIV. of 1856, ...	383	...	...	...	...	...	207	...	266	...	473
,, of the Wheel Tax Act, ,, XXVI. of 1856, ...	113	...	...	...	...	...	112	...	109	...	221
Violation of duty by Police Officers, ...	6	...	...	6	...	...	2	...	2	...	9
Preferring charges without sufficient grounds, ...	43	...	...	...	...	...	38	...	8	...	46
	16,168	...	27	765	20	365	10,746	20	9,387	22	21,352

On 8th July, 1858, the Government remark that the increase in the number of cases is probably to be attributed to the operation of the new Police act, and the conservancy and wheel tax acts, all of which created numerous petty offences. Owing to the great number of cases at the "Town Police Court" a proposal for the appointment of a fourth Magistrate was made to the Court of Directors.

EXTERNAL COMMERCE OF BENGAL
For 1857-58.

The total value of the imports and exports into and from Bengal "(including Chittagong, Balasore and the Provinces of Arracan and Tenasserim) is stated for the year 1857-58 at Rupees 33,46,92,769, showing an increase of Rupees 1,37,39,791 in the imports, and of Rupees 91,89,630 in the exports, as compared with those of 1856-57, or a total increase on the average value of the commerce during the three previous years of 1854-55, 1855-56 and 1856-57, of Rupees 6,42,02,693."

The imports exceeded the exports by Rupees 14,31,153. Those on private account consisted of merchandise and treasure, and their total value was Rupees 15,89,46,673, showing a decline of Rupees 50,97,426 in merchandise. This decrease is seen in Europe goods such as cabinet ware, cotton twist and yarn, cotton piece goods, glass ware and metals wrought and unwrought, and salt (chiefly Liverpool) timber and planks. The Government consignments, amounting to Rupees 91,15,288, shew an increase of Rupees 29,74,685 in excess of those of the previous year.

"The total value of exported goods and treasure in 1857-58 is Rupees 16,66,30,808, of which Rupees 14,83,27,056 is on account of private trade, and Rupees 1,83,03,752 on public account."

There was a large increase in the export of grain (Rupees 23,10,132) jute (Rupees 2,82,285) opium (Rupees 92,73,152) raw silk (Rupees 10,93,025) and tobacco (Rupees 1,69,094) There was a decrease however of more than Rupees 27,00,000 in cotton, wool, indigo, gunnies, hides, oils, saltpetre, seeds, shawls (Cashmere) silk piece goods, sugar, wax and wax candles. "In treasure exported on private account, there is a decrease of Rupees 16,01,152, and an increase in all Government shipments to the extent of Rupees 91,60,327."

There was a large increase in the shipping and tonnage and in the average size of the vessels that touched at the several ports in the British dominions in the East. The following statement shows the aggregate value of the principal articles of import into Calcutta by sea in 1857-58 compared with similar imports in 1856-57:—

Statement showing the Aggregate Value of the Principal Articles of Import into Calcutta by Sea in 1857-58, *compared with similar Imports in* 1856-57.

	1856-57.	1857-58.
Apparel,	22,25,173	21,84,574
Beads,	3,61,831	4,57,731
Books and Stationery,	12,24,203	10,95,221
Cabinet-ware,	8,60,655	2,91,626
Chanks,	84,116	74,698
Cigars,	2,26,647	4,45,718
Coals,	3,96,860	3.46.775
Coffee,	71,614	3,01,217
Cotton Twist and Yarn,	81,22,578	62,30,556
,, Piece Goods,	3,17,15,287	2,86.43,493
Drugs,	2,88,218	1,54,277
Dyes,	3,99,202	4.49,150
Fruits and Nuts,	11,40,169	10,01,212
Glass-ware,	7,78,963	4,69,094
Gums,	65,536	68,652
Hides,	5,85,906	6,80.479
Ice,	1,22,065	1,91,849
Instruments, Musical,	1,67,152	90,075
Jewellery,	7,13,295	5.97,606
Machinery,	19,07,381	30,73.229
Malt Liquors,	7,33,499	9,56,266
Manufactured Metals,	76,12,339	65,55,702
Medicine,	2,22,221	1,70,394
METALS. Copper,	25,13,819	20,76,215
Iron,	17,83,703	18,36,745
Lead,	1,25,763	2,33,725
Quicksilver,	1,93,568	2.21,317
Spelter,	4,48,312	2,56.996
Steel,	1,00,854	1,29,412
Tin,	2,22,419	4.71,108
Yellow Metal,	2,88,178	3,17,037
Military Stores,	21,060	16,551
Naval Stores,	4,93,408	4,42.243
Oilman's Stores,	3,12,687	4.31,916
Paints and Colors,	3,60,968	4.07,333
Perfumery,	2,12,648	1,72,361
Porcelain and Earthen-ware,	1,80,265	1,24.281
Provisions,	4,78,382	6,71,444
Salt,	38,45,371	34,29,278
Silk Goods,	5,57,686	3,97,446
Spices,	11,54,396	9,74,429
Spirits,	8,94,276	9,81,956
Timber and Planks,	3.17,165	1,32,558
Umbrellas,	4,49,896	5,87,199
Wines,	10,08,737	12,01,559
Woollens,	6,88,156	10,71,699
Sundries,	22,63,606	30,05,116
Merchandise,	7,89.39.727	7,50,20,218
Treasure,	6,58,46,272	8,15,62,217
Total Rupees,	14,47,85,999	15,65,82,435

SPECIE AND BULLION.

IMPORTS.	1856-57.	1857-58.
United Kingdom, ...	3,87,10,796	4,42,82,958
Aden, ...	51,300	27,058
America, North, ...	48,375	20,250
Arabian Gulf, ...	66,725	3,14,050
Bourbon,...	8,92,989	11,50,565
Cape of Good Hope,...	.....	4,200
Ceylon, ...	1,58,150	7,75,663
China, Hongkong, ...	15,08,615	55,18,340
China, Other Ports, ...	60,09,870	57,48,025
France, ...	70,41,270	59,29,926
Malta, ...	80,600	2,84,950
Mauritius, ...	5,17,530	11,55,197
New South Wales, ...	28,78,111	11,17,477
Penang, Singapore and Malacca, ...	41,22,985	15,22,949
Persian Gulf, ...	80,000	1,07,000
Sumatra,...	.....	13,500
Suez, ...	16,55,161	26,16,241
Trieste, ...	.....	410
Bombay,...	15,765	52,12,637
Madras, ...	11,56,345	51,75,514
Rangoon, ...	7,93,685	5,44,344
Pondichery, ...	58,000	40,963
Total, Rupees, ...	6,58,46,272	8,15,62,217

EXPORTS BY SEA.	Ceylon.	Rangoon.	Penang, Singapore & Malacca.	Bombay.	Total. 1857-58.	Total. 1856-57.
Treasure,	50,000	18,48,825	3,44,927	1,60,60,000	1,83,03,752	91,43,425

Bills drawn by the Honorable the Court of Directors on the Bengal Government.		*Bills drawn by the Bengal Government on the Honorable the Court of Directors.*	
	Rupees.		Rupees.
In 1856-57, ...	2,35,18,874	In 1856-57, ...	1,81,779
In 1857-58, ...	51,34,863	In 1857-58, ...	4,02,853
Decrease, Rupees, ...	1,83,84,011	Increase, Rupees, ...	2,21,074

Statement showing the Aggregate Value of the Principal Articles of Export from Calcutta by Sea in 1857-58, *compared with similar Exports in* 1856-57.

	1856-57.	1857-58.
Apparel,	20,757	56,264
Books,	3,348	2,077
Cotton Goods,	6,95,730	6,74,981
„ Wool,	21,02,295	1,13,408
Cowries,	16,182	33,728
Drugs,	5,38,342	4,04,798
Dyes, Indigo,	1,47,66,431	1,34,58,121
Dyes, Other sorts,	3,46,955	3,35,638
Grain,	1,77,82,762	2,00,92,894
Gunnies and Bags,	41,20,881	34,77,260
Hides,	49,77,136	44,78,939
Horns,	1,13,009	98,693
Jute,	27,49,754	30,32,039
Lac,	10,50,397	10,61,827
Naval Stores,	3,21,043	3,73,858
Oils,	5,55,234	3,54,672
Opium, Behar,	2,68,62,207	3,38,56,511
Opium, Benares,	1,13,25,832	1,36,04,680
Provisions,	2,38,890	1,07,850
Saltpetre,	54,10,742	35,35,614
Seeds,	58,01,124	45,56,513
Shawls, Cashmere,	3,44,678	1,25,235
Silk Piece Goods,	26,51,159	16,23,721
„ Raw and Cocoons,	69,95,168	80,88,193
Spirits, Rum,	1,61,722	66,907
Sugar,	1,62,24,593	1,00,14,411
Tallow,	1,74,466	91,645
Tobacco,	2,12,419	3,81,513
Wax and Wax Candles,	3,63,680	1,07,544
Sundries,	17,16,262	16,54,036
Total,	12,86,43,198	12,58,63,560
Imports Re-exported,	48,72,030	58,19,243
Total,	13,35,15,228	13,16,82,803
Treasure,	62,15,295	48,57,015
Total Rupees,	13,97,30,523	13,65,39,818

Calcutta Price Current exhibiting the Highest and Lowest Market Prices of Goods Imported by Sea from 1st May, 1857 to 30th April, 1858.

ARTICLES.		Highest Price.			Lowest Price.		
		Rs.	As.	P.	Rs.	As.	P.
Ale, Allsopp's, ...	Per hhd.	90	0	0	72	0	0
„ Bass', ...	„	90	0	0	70	0	0
„ Other Marks, ...	„	80	0	0	55	0	0
Aloes, ...	Per md.	30	0	0	25	0	0
Alum, ...	„	4	0	0	3	12	0
Aniseed, Star, ...	„	30	0	0	25	0	0
Antimony, ...	„	16	0	0	15	0	0
Arsenic, White, ...	„	22	0	0	13	0	0
„ Red, ...	„	23	0	0	22	0	0
„ Yellow, ...	„	15	0	0	12	0	0
„ Orpiment, ...	Per seer.	0	8	0	0	8	0
Assafœtida, ...	„ md.	40	0	0	40	0	0
Beads, Seed, Europe, ...	„ lb.	1	4	0	1	2	0
„ Aleppo, Red, ...	„	0	12	0	0	12	0
„ Small, „ ...	„	0	4	0	0	4	0
„ Common, ...	„	0	7	0	0	7	0
„ China, ...	Per box.	40	0	0	35	0	0
„ Roodrag, or Genetries,	„ 1,000.	20	0	0	20	0	0
Bottles, ...	„ 100.	7	8	0	7	0	0
Brimstone, ...	„ md.	3	8	0	3	0	0
„ Medicinal, ...	„	12	0	0	12	0	0
Broad Cloth, Superfine, ...	Per yard.	12	0	0	12	0	0
„ Ordinary, ...	„	4	0	0	4	0	0
Bunting, ...	Per piece.	11	0	0	10	0	0
Camphor, ...	„ md.	31	0	0	25	0	0
Canvas, ...	„ bolt.	25	0	0	19	0	0
Cardamum, ...	„ seer.	4	0	0	3	8	0
Cassia, China, ...	„ md.	48	0	0	29	0	0
Catechu, ...	„	13	0	0	6	8	0
Cloves, ...	Per seer.	0	6	9	0	5	6
Coals, ...	„ md.	1	0	0	0	10	0
Cochineal, ...	„ seer.	4	8	0	4	4	0

Calcutta Price Current exhibiting the Highest and Lowest Market Prices of Goods Imported by Sea from 1st May, 1857 to 30th April, 1858.—(Continued.)

ARTICLES.		HIGHEST PRICE.			LOWEST PRICE.		
		Rs.	As.	P.	Rs.	As.	P.
Cocoa, ...	Per seer.	1	0	0	1	0	0
Cocoanuts,...	„ 1,000.	38	0	0	35	0	0
Coffee, Mocha, ...	„ md.	32	0	0	23	0	0
„ Other Places, ...	„	25	0	0	21	0	0
Coir, Maldive,..	„	11	8	0	7	8	0
„ Laccadive, ...	„	8	0	0	6	0	0
„ Ceylon, ...	„	5	0	0	5	0	0
Copperas, ...	„	3	4	0	2	2	0
Corals, Good, ...	Per sa. wt.	10	0	0	8	0	0
„ Ordinary, ...	„	1	0	0	0	8	0
Cordage,.	Per cwt.	24	0	0	20	0	0
Corks, ...	„ gross.	2	6	0	2	4	0
Dates, Bussorah, ...	„ md.	6	0	0	6	0	0
Gallnuts, ...	„	34	0	0	30	0	0
Glue, China, ...	Per seer.	0	12	0	0	10	0
Gum Ammoniac, ...	„ md.	10	0	0	10	0	0
„ Arabic, ...	„	20	0	0	16	0	0
„ Bdellium, ...	„	5	0	0	5	0	0
„ Benjamin, ...	„	45	0	0	40	0	0
„ Copal, ...	„	80	0	0	60	0	0
„ Gamboge,... ...	„	45	0	0	45	0	0
„ Mastic, ...	Per seer.	2	0	0	2	0	0
„ Myrrh,.	„ md.	12	0	0	12	0	0
„ Olibanum, ...	„	10	0	0	5	0	0
Gunpowder, Sporting, ...	Per lb.	1	6	0	1	5	0
Horns, Buffalo, ...	„ 100.	20	0	0	12	0	0
Ising Glass, ...	„ lb.	7	0	0	7	0	0
Lead, Red,...	„ md.	7	0	0	7	0	0
„ White, ...	„	14	0	0	11	0	0
METALS AND SEMI-METALS.							
Copper, Brazier or Sheet,...	Per md.	54	4	0	47	6	0

Calcutta Price Current exhibiting the Highest and Lowest Market Prices of Goods Imported by Sea from 1st May, 1857 to 30th April, 1858.—(Continued.)

ARTICLES.		Highest Price.			Lowest Price.		
		Rs.	As.	P.	Rs.	As.	P.
Copper, Bolt, ...	Per md.	58	8	0	53	0	0
„ Sheathing, ...	„	50	0	0	45	11	0
„ Composition Nails,	„	48	12	0	43	8	0
„ Old, ...	„	46	12	0	42	0	0
„ Tile and Ingot, ...	„	54	3	0	49	0	0
„ Japan, ...	„	53	12	0	47	13	0
Iron, Knees, ...	Per cwt.	7	8	0	7	0	0
„ Sheet, ...	„ md.	5	6	0	4	9	0
„ Anchor, ...	„ cwt.	17	0	0	11	0	0
„ Nails, ...	„	15	0	0	10	0	0
„ Hoop, ...	Per md.	5	0	0	4	7	0
„ Swedish, Square, ...	„	8	10	0	6	11	0
„ Ditto, Flat, ...	„	8	10	0	6	11	0
„ English, Square, ...	„	4	5	0	3	10	0
„ Ditto, Flat, ...	„	4	5	0	3	10	0
„ Ditto, Bolt, ...	„	4	5	0	3	10	0
„ Round, Rod and Nail,	„	4	13	0	4	4	0
„ Kentledge, ...	Per cwt.	1	5	0	0	12	0
Lead, Pig, ...	„ md.	10	8	0	8	4	0
„ Sheet, ...	„	10	12	0	9	2	0
Quicksilver, ...	Per seer.	2	9	0	2	0	0
Steel, Swedish, ...	„ md.	11	6	0	8	14	0
Spelter, ...	„	13	14	0	12	12	0
Tin, Plates, ...	Per box.	38	0	0	36	0	0
„ Block, New, ...	„ md.	57	8	0	46	0	0
Nutmeg, ...	„ seer.	2	0	0	1	10	0
„ Wild, ...	„ md.	10	0	0	10	0	0
Oil, Earth,...	„	12	0	0	12	0	0
„ Fish, ...	„	10	0	0	10	0	0
„ Cocoanut, ...	„	11	8	0	11	8	0
„ Linseed, ...	Per gallon.	3	2	0	2	10	0
„ Sandal-Wood, ...	„ seer.	13	0	0	8	0	0

Calcutta Price Current exhibiting the Highest and Lowest Market Prices of Goods Imported by sea from 1st May, 1857 to 30th April, 1858.—(Continued.)

ARTICLES.		HIGHEST PRICE.			LOWEST PRICE.		
		Rs.	As.	P.	Rs.	As.	P.
Oil, Rose, ...	Per sa. wt.	5	0	0	5	0	0
„ Turpentine, ...	„ gallon.	2	4	0	1	11	0
Paint, of sorts, ...	„ lb.	2	6	0	2	6	0
Pepper, Black, ...	„ md.	14	6	0	14	0	0
„ Long,...	„	16	8	0	13	8	0
Pitch, ...	Per barrel.	12	0	0	11	0	0
Porter, ...	„ hhd.	75	0	0	45	0	0
Prunes, Bussorah,...	„ md.	20	0	0	20	0	0
Raisins, „	„	10	0	0	10	0	0
Rattan, ...	Per lb.	5	8	0	5	0	0
Rose Water, ...	„ md.	20	0	0	20	0	0
Rosin, ...	„ barrel.	5	8	0	3	4	0
„ Bussorah, ...	„	10	0	0	10	0	0
Saffron, ...	Per seer.	30	0	0	23	0	0
Sago, Pearl, ...	„ md.	8	0	0	7	0	0
Sallop Misry, ...	„ seer.	6	0	0	6	0	0
Sandal, Wood, ...	„ md.	19	0	0	14	0	0
„ Ordinary,... ...	„	3	0	0	3	0	0
Sarsaparilla, ...	Per seer.	2	8	0	2	8	0
Segars, Manilla, ...	„ 1000.	60	0	0	52	0	0
Senna Leaf, ...	„ md.	7	0	0	4	0	0
Skins, Morocco, ...	„ piece.	5	0	0	5	0	0
„ Goat's, Madras, ...	„ 100.	60	0	0	32	0	0
Stick Lac, ...	„ md	12	0	0	7	8	0
Tea of Qualities, ...	„ chest.	95	0	0	90	0	0
Tobacco, American, ...	„ lb.	1	0	0	0	6	0
Tortoise Shell, ...	„ seer.	28	0	0	24	0	0
Twine, Europe, ...	„ lb.	0	0	0	0	10	0
Wood, Mahogany, ...	„ foot.	0	10	0	0	4	0

Principal Articles of Import and Export to and from Chittagong in 1857-58, *compared with similar Imports and Exports in* 1856-57.

IMPORTS.	1856-57.	1857-58.
Betelnuts, ...	2,715	3,493
Cocoanuts, ...	11,884	12,220
,, Shell,..	178	828
,, Oil, ...	1,575	769
Cowries,...	8,225	15,759
Coir and Coir Rope, ...	10,815	15,290
Dammer, ...	3,149	1,064
Timber, ...	3,375	.....
Sundries, ...	10,653	7,702
Total, ...	52,569	57,125
Treasure, ...	4,000	63,500
Total Rupees, ...	56,569	1,20,625

EXPORTS.	1856-57.	1857-58.
Grain, ...	4,55,738	2,60,964
Piece Goods, ...	7,188	8,301
Sugar and Sugar Candy, ...	2,665	6,222
Tobacco,...	5,964	8,636
Twist and Yarn, ...	1,066	401
Timber and Planks, ...	737	2,742
Sundries, ...	8,156	12,835
Total Rupees,.	4,81,514	3,00,101

Principal Articles of Import and Export to and from Balasore in 1857-58 *compared with similar Imports and Exports in* 1856-57.

IMPORTS.	1856-57.	1857-58.
Blankets, ...	.....	37
Cocoanuts, ...	7,540	.....
Coir, ...	2,390	.....
Cowries, ...	165	.....
Cloth, ...	1,162	.....
Grain, ...	3,793	.....
Sundries, ...	3,883	.....
Total, ...	18,933	37
Treasure, ...	10,500	.....
Total Rupees, ...	29,433	37

EXPORTS.	1856-57.	1857-58.
Grain, ...	1,48,187	34,874
Sundries, ...	292	169
Total Rupees, ...	1,48,479	35,043

Principal Articles of Import and Export to and from Arracan in 1857-58 *compared with similar Imports and Exports in* 1856-57.

IMPORTS.	1856-57.	1857-58.
Apparel, ...	415	3,413
Ale—Beer, ...	7,448	5,740
Brandy and Gin, ...	2,790	12,134
Cotton Piece Goods, ...	7,537	9,867
Metal—Iron, ...	5,980	3,426
Timbers, ...	9,526	11,252
Wines, ...	4,046	3,314
Sundries, ...	67,246	1,52,612
Total, ...	1,04,988	2,01,758
Treasure, ...	3,21,554	2,26,350
Total Rupees, ...	4,26,542	4,28,108

EXPORTS.	1856-57.	1857-58.
Grain, ...	29,85,078	61,06,038
Hides, ...	.....	2,481
Horns,...	.....	1,340
Jute, ...	1,000	...
Rattans, ...	728	208
Pepper, ...	5,678	...
Tobacco, ...	56,544	54,357
Sundries, ...	4,201	3,672
Total, ...	30,53,229	61,68,996
Treasure, ...	2,66,369	2,982
Total Rupees, ...	33,19,598	61,71,978

Principal Articles of Import and Export to and from the Tenasserim Provinces in 1857-58 *compared with similar Imports and Exports* in 1856-57.

IMPORTS.	1856-57.	1857-58.
Arms and Ammunition, ...	28,791	.....
Cutch, ...	16,176	.....
Grain, ...	1,08,636	15,767
Malt Liquor, ...	24,051	48,976
Metals, { Copper, ...	.....	8,855
Metals, { Iron, ...	24,052	23,612
Piece Goods, Cotton, ...	7,99,065	6,02,689
Spirits, ...	.....	13,542
Tobacco, ...	31,427	1,22,307
Twist and Yarn, ...	1,60,649	11,691
Wines	8,005	23,607
Sundries, ...	12,58,050	8,37,852
Total, ...	24,58,902	17,08,898
Treasure, ...	4,24,122	1,06,570
Total Rupees, ...	28,83,024	18,15,468

EXPORTS.	1856-57.	1857-58.
Betel Nuts, ...	82,504	...
Cutch, ...	5,744	...
Fish-maws, ...	3,041	1,910
Grain, ...	9,27,692	9,42,035
Horns,...	189	72
Piece Goods, Cotton, ...	5,04,598	...
Stick Lac, ...	15,616	93
Timber, ...	20,63,966	26,46,016
Twist and Yarn, ...	2,12,607	...
Sundries, ...	6,53,772	15,21,565
Total, ...	44,69,729	51,11,691
Treasure, ...	1,47,910	1,68,425
Total Rupees, ...	46,17,639	52,80,116

The gross receipts of the several Custom Houses amount to Rupees 1,33,88,625 and the *net* customs revenue to 1,26,15,945, showing a decrease since the previous year of Rs. 13,86,038. The tonnage of Calcutta during the year was 7,14,529 belonging to 1,028 vessels inwards; being an increase of 17 vessels and 1,42,402 tons. Outwards there were 967 vessels with an aggregate of 6,58,149 tons showing a decrease of 146 vessels and 8,267 tons. Of the 1028 arrivals 505 were British, 146 American, 110 French, 137 steamers, 93 native craft and a few of other nations. Of the 967 departures 452 were British, 152 American, 108 French, 127 steamers, 88 native craft and a few of other nations.

The largest trade is with Great Britain amounting in value in *Imports* to

Merchandise, ...		6,44,62,886
Treasure,	Gold, ...	2,55,278
	Silver, ...	4,40,27,680
Rupees, ...		10,87,45,844
Exports.		
Merchandise, ...		3,90,35,971
Treasure,	Gold, ...	6,460
	Silver, ...	11,140
Rupees, ...		3,90,53,571

North America sends merchandise and treasure to the value of Rupees 7,90,661, and takes to the value of Rupees 82,65,250. *China* sends to the value of Rupees 1,29,08,506 and takes Rupees 4,58,00,241 in value. *France* sends to the value of Rupees 76,31,579 and takes Rupees 56,68,977.

TRADE OF THE MADRAS TERRITORIES

For 1857-58.

IMPORTS.	*Merchandise.*	*Treasure.*
Ganjam, ...	Rs. 24,199	Rs. 41,000
Vizagapatam, ...	2,76,103	...
Rajahmundry, ...	2,70,164	2,09,834
Masulipatam, ...	1,03,550	...
Guntoor, ...	7,042	...
Nellore, ...	8,749	...
Madras, ...	1,59,80,385	1,07,76,190
South Arcot, ...	97,957	67,917

IMPORTS	*Merchandise.*	*Treasure.*
Tanjore, ...	Rs. 10,76 521	Rs. 8,34,760
Madura, ...	1,31,839	.....
Tinnevelly, ...	3,74.179	7,28,416
Malabar, ...	44,55,163	26,28.921
Canara, ...	18.79,602	33,36,124
EXPORTS.		
Ganjam, ...	13.36,353	4,000
Vizagapatam, ...	30.20,848	.....
Rajahmundry, ...	24,57,486	50,300
Masulipatam, ...	1,71,908	.....
Guntoor, ...	1,809	1,300
Nellore, ...	70,043	.....
Madras, ...	1,21,58,483	99,47,473
South Arcot, ...	6,74,911	.....
Tanjore, ...	32,15,555	3,10,000
Madura, ...	4,14,739	.....
Tinnevelly, ...	20,61,445	5,20,000
Malabar, ...	49 42,583	67,793
Canara, ...	98,38,998	8,00,000

The re-exports are also given, and the tonnage which is as follows :—

	Arrivals.	*Departures*
Ganjam, ...	Tons, 8.014	41,937
Vizagapatam, ...	26,414	49.953
Rajahmundry, ...	28.727	69,721
Masulipatam, ...	6.947	10,236
Guntoor, ...	747	1,546
Nellore, ...	396	4,746
Madras, ...	3,27,734	2,94.493
South Arcot, ...	9.221	14,666
Tanjore, ...	49.520	81,085
Madura, ...	25,830	42,323
Tinnevelly, ...	37.562	33,760
Malabar, ...	1,69,300	1,73,757
Canara, ...	81,620	96,944

The following is the description of the trade, article by article :—

Articles.	IMPORTS.		*Rs.*
Alum, ...		Cwt.	39,216
Apparel. Boots and Shoes, ...		Value Rs.	16,870
Apparel. Buttons, ...	,,	do.	1,358
Apparel. Gloves, ...		do.	17,195
Apparel. Gold & Silver Lace & Thread,		do.	2,04,714
Apparel. Haberdashery,.. ...		do.	60,066
	Carried forward, ..		3,39,419

IMPORTS.

Articles.			*Rs.*
		Brought forward, ...	3,39,419
Apparel—Continued.	Hats and Caps, ...	... Value Rs.	44,230
	Hosiery, ...	do.	61,917
	Millinery, ...	... do.	4,11,099
	Wearing Apparel, ...	do.	2,08,221
	Do. Military, ...	.. do.	71,516
Arms and Ammunition,		.. do.	1,23,565
Bags, Cloth, ...		.. No.	12,594
Do. Canvass,	... ...	do.	6,897
Do. Mat,	... ...	... do.	1,045
Bats and Balls,	... ..	Value Rs.	1,879
Beads,	... ...	.. do.	48,874
Billiard Table,	... ...	do.	5,330
Books & Stationery.	Books—British,	... do.	1,17,701
	Do. Foreign, ...	do.	1,538
	Gilt and Colored Papers,	... do.	10,837
	Prints and Engravings, ...	do.	13,253
	Stationery, ...	... do.	2,81,248
Brushes,	... ...	do.	8,785
Cabinetware,	... ..	... do.	15,637
Cards, Playing,	...	do.	9,167
Carriages,	...	... do.	11,271
Cattle.	Elephants, ...	No.	4,600
	Horses, ..	... do.	6,39,820
Chalk,	.. ...	Cwt.	1,698
Chanks,	.. ...	... No.	39,543
Chemicals,	..	Value Rs.	5,829
Coach Furniture,	...	.. do.	12,525
Coal and Coke,	...	Tons,	3,67,919
Coffee,	... ...	... lbs.	11,652
Congreves or Matches,	...	Value Rs.	5,497
Corks,	... ...	... Gross,	13,456
Cotton Wool,	... ...	lbs.	1,44,714
Cotton Goods.	Twist and Yarn—British,	... do.	20,95,210
	Do. Foreign, ...	do.	50,097
	Thread, ...	... do.	70,184
	Piece Goods—Dyed, ...	Pieces, / Yards,	8,39,999
	Do. Printed, ...	Pieces, / Yards,	5,43,530
	Do. Plain, ..	Pieces, / Yards,	24,09,463
	Lace and Small Ware, ...	Value Rs.	7,314
		Carried forward, ...	90,69,133

Articles.	IMPORTS	*Rs.*
	Brought forward, ...	90,69,133
Cowries,..	...Value Rs	1,482
Cow Tails, ...	Cwt.	12,105
Drugs. Aculakar, ...	do.	5,614
Arsenic, ...	do.	1,399
Amookoona Root,...	... do.	1,835
Assafœtida, ...	do.	69,102
Borax or Tincal, ..	... do.	12,006
Brimstone, ...	do.	3,536
Camphor, ..	... lbs.	1,16,887
Do. Green, ...	do.	12,629
China Root, ...	.. Cwt.	3,916
Cinnabar, ...	do.	5,638
Copperas, ...	... do.	1,797
Cubebs, ...	do.	2,107
Gallingal, ...	... do.	6,148
Gallnuts, ...	do.	1,143
Goodauck, ...	... do.	4,561
Liquorice Root, ...	do.	1,662
Long Pepper Root,..	... do.	4,808
Musk, ...	lbs.	460
Opium—On Company's Acct.	Cases,	1,238
Potash, ...	Cwt.	4,808
Russacarpooram, ...	... do.	2,295
Salamoniac, ...	do.	500
Sulphuric Acid, ...	... Gallons,	977
Turpentine, ...	do.	2,715
Other sorts, ...	...Value Rs.	47,686
Dyes. Catechu or Terrajaponica, ...	Cwt.	42,214
Choya Root, ...	... do.	8,831
Cochineal, ...	do.	362
Indigo, ...	... lbs.	5,201
Madder or Munjeet, ...	Cwt.	23,034
Poovathoo, ..	... do.	35,339
Saffron, ...	lbs.	4,858
Turmeric, ...	... do.	4,807
Other sorts, ...	...Value Rs.	2,973
Eppapindy, ...	Cwt.	773
Fans, ...	Value Rs.	662
Fireworks, ...	do.	31,216
	Carried forward,...	15,58,457

IMPORTS.

Articles.			*Rs.*
	Brought forward, ...		95,58,457
Fruits and Nuts.	Albacur, ...	Cwt.	400
	Almonds, ...	do.	14,081
	American Apples, ...	Barrels,	4,500
	Betelnut—Boiled, ...	Cwt.	1,65,558
	do. Raw, ...	do.	2,25,017
	Cashewnuts, ...	do.	1,201
	Cocoanuts, ...	No.	64,801
	do. Kernels, ...	Cwt.	47,915
	Dates, ...	do.	1,55,665
	Kismiss, ...	do.	4,549
	Raisins, ...	do.	12,276
	Tamarind, ...	do.	16,926
	Other sorts, ...	Value Rs.	5,503
Glass-ware.	Bottles, ...	do.	3,660
	Looking Glass ...	do.	580
	Other sorts, ...	do.	1,63,867
Gold Leaves, ...		do.	6,900
Grain.	Anoomooloo, ...	Qrs.	1,511
	Caramunloo, ...	do.	1,275
	Condooloo, ...	do.	2,990
	Dholl, ...	do.	19,595
	Horse Gram, ...	do.	3,372
	Menoomooloo, ...	do.	30,921
	Paddy, ...	do.	3,53,328
	Pease, ...	do.	45,380
	Pessaloo, ...	do.	1,855
	Rice, ...	do.	8,21,518
	Sanagaloo, ...	do.	31,236
	Wheat, ...	do.	2,17,841
	Other sorts, ...	Value Rs.	11,336
Grocery, ...		do.	7,598
Gums.	Asphaltum, ...	Cwt.	2,633
	Benjamin, ...	do.	50,805
	Frankincense, ...	do.	1,019
	Glue, ...	do.	4,688
	Rosin, ...	do.	1,163
	Other sorts, ...	Value Rs.	3,379
Gunnies and Gunny Bags, ...		No.	4,09,091
Hides,	Tanned, ...	do.	50,581
	Untanned, ...	do.	11,991
Ice, ...		Tons,	37,600
	Carried forward, ...		1,25,74,565

	Articles.	IMPORTS.		*Rs.*
		Brought forward, ...		1,25,74,565
Instruments.	Band, ...	...Value Rs.		13,890
	Chemical, ...	do.		1,597
	Mathematical, ...	do.		7,295
	Musical, ...	do.		53,323
	Optical, ...	do.		967
	Philosophical, ...	do.		1,619
	Surgical, ...	do.		5,866
	Surveying, ...	do.		3,077
	Other sorts, ...	do.		2,167
Ivoryware,	... ...	do.		1,723
Jewellery.	Clocks and Watches, ...	do.		41,666
	Coral, ...	do.		95,545
	Do. False, ...	do.		3,100
	False Pearls, ...	do.		8,240
	Limitta, ...	do.		9,314
	Other sorts, ...	do.		87,537
Lac Stick,	.. ..	Cwt.		8,412
Machinery,	... ...	Value Rs.		1,15,754
Malt Liquors,	... ...	Gallons,		1,82,852
Do. On Company's Account,		... do.		14,400
Manufactured Metals.	Brassware, ...	...Value Rs.		26,542
	Copperware, ...	do.		14,822
	Cutlery, ...	do.		69,310
	Hardware, ...	do.		1,98,227
	Ironware, ...	do.		68,689
	Lacqueredware, ...	do.		2,159
	Pewterware, ...	do.		489
	Platedware, ...	do.		72,710
	Silverware, ...	do.		5,846
	Silver Plate, ...	do.		9,845
	Tinware, ...	do.		6,467
	Types—Printing, ...	do.		21,687
	Other sorts, ...	do.		30,991
Marble Slabs,	... ...	do.		3,808
Mats,	... ...	do.		5,393
Materials.	Book Binding, ...	do.		2,454
	Drawing, ...	do.		3,114
	Printing, ...	do.		19,783
	Shoe Maker's, ...	do.		5,126
	Watch and Watch Maker's ...	do.		1,708
	Other Sorts, ...	do.		705
		Carried forward, ...		1,38,02,784

Articles.	IMPORTS.		*Rs.*
	Brought forward, ..		1,38,02,784
Medicines, ...	Value Rs.		53,915
Metals. Copper. Bolt and Ingot, ...	do.		1,14,305
Nails, ...	do.		9,820
Old, ...	do.		33,149
Rod, ...	do.		24,872
Sheet, ...	do.		3,18,797
Sheathing, ...	do.		39,945
Slabs and Tiles, ...	do.		23,211
Iron. Bar and Bolt, ...	do.		4,76,869
Hoop;	do.		53,627
Nails, ...	do.		16,362
Old, ...	do.		7,696
Pig, ...	do.		232
Rod, ...	do.		24,507
Sheet, ...	do.		28,855
Sheathing, ...	do.		2,751
Screws, ...	do.		1,725
Swedish, ...	do.		5,537
Wire, ...	do.		4,812
Gong Metal,...	do.		64,072
Steel, ...	Cwt.		24,141
Do. Swedish, ...	do.		956
Spelter, ...	do.		24,853
Tin, ...	do.		78,515
,, Plates, ...	do.		58,767
Lead Pig, ...	do.		47,115
Do. Sheet, ...	do.		10,829
Brass, ...	do.		16,501
Do. Old, ...	do.		47,843
Do. Sheet, ...	do.		25,261
Do. Sheathing, ...	do.		1,886
Do. Leaves, ...	do.		6,792
Do. Wire, ...	do.		4,917
China Cash, ...	Value Rs.		47,390
Copper do.	do.		65,757
Composition Metal, ...	do.		1,58,496
Do. Nails, ...	do.		7,131
Do. Sheathing, ...	do.		3,735
Yellow Metal, ...	Cwt.		4,198
Do. Sheathing,... ..	do.		1,225
Patent ,, ...	do.		43,853
Quicksilver, ...	do.		22,810
Zinc, ...	do.		1,213
Other sorts, ...	Value Rs.		14,047
	Carried forward, ..		1,58,26,074

Articles.	IMPORTS.	*Rs.*
	Brought forward, ...	1,58,26,074
Military Stores.	On Compy.'s Acct. ... Value Rs.	22,00,861
	,, Private Acct.... ... do.	23,131
Molasses or Jagree, ... Cwt.		32,987
Do. Palmira,... ... ... do.		
Naval Stores.	Anchors, ... do.	2,608
	Canvas, ... Bolts,	34,970
	Chain Cable, ... Cwt.	5,939
	Coir and Coir Rope, ... do.	91,642
	Cordage, ... do.	3,189
	Hemp, ... do.	31,508
	Do. Rope, ... do.	2,523
	Pitch, Tar and Dammer, .. do.	24,150
	Twine, ... do.	26,327
	Other sorts, ... Value Rs.	31,633
Oils.	Castor, ... Gallons,	2,535
	Cocoanut, ... do.	2,392
	Cod Liver,... ... ... do.	754
	Gingely, ... do.	23,748
	Fish, ... do.	4,774
	Linseed, ... do.	11,928
	Onneah, ... do.	4,296
	Wood, ... do.	5,035
	Other sorts, ... Value Rs.	7,028
Oilman's Stores, ... do.		1,46,362
Paints and Colors.	Arthal, ... Cwt.	2,850
	Prussian Blue, ... do.	2,231
	Red Lead,.. ... ... do.	10,427
	Sandrach (Sundroos) .. do.	5,111
	Varnish, ... Gallons,	21,920
	Verdigris, ... Cwt.	2,039
	Vermillion, ... do.	4,554
	White Lead, ... do.	7,185
	Other sorts, ... Value Rs.	32,581
Papier Mache Ware, ... do.		3,955
Perfumery.	Eau-de-Cologne, ... Dozens,	17,281
	Lavender, ... do.	4,091
	Putchock, ..." Cwt.	1,041
	Rose Water, ... Gallons,	10,255
	Other sorts, ... Value Rs.	43,249
Photographic Apparatus, ... do.		7,726
Do. Chemicals, ... do.		3,525
Pictures and Portraits, ... do.		6,345
Do. Frames, ... do.		50
	Carried forward, ...	1,87,32,810

Articles.	IMPORTS.	*Rs.*
	Brought forward, ...	1,87,32,810
Pipe Staves and Casks, ...	Value Rs.	1,74,114
Porcelain and Earthenware, ..	do.	95,157
Precious Stones. Diamonds, ...	do.	28,105
Precious Stones. Pearls, ...	do.	65,390
Precious Stones. Rubies, ...	do.	33,650
Precious Stones. Other sorts, ...	do.	2,900
Provisions. Arrowroot, ...	Cwt.	1,274
Provisions. Barley, ...	do.	2,096
Provisions. Confectionery, ...	Value Rs.	22,708
Provisions. Flour, ...	Cwt.	39,252
Provisions. Fresh, ...	Value Rs.	21,579
Provisions. Ghee, ...	Cwt.	27,122
Provisions. Sago, ...	do.	7,467
Provisions. Salted, ...	Value Rs.	51,361
Provisions. Other sorts, ...	do.	12,563
Railway Materials, ...	do.	4,98,108
Rattans and Canes, ...	do.	13,831
Saddlery, ...	do.	61,080
Salt. On Co.'s Acct. ...	lbs.	1,80,789
Salt. ,, Private do. ...	do.	22,589
Salt. Goa, ...	do.	7,607
Salt. Rock, ...	Cwt.	5,864
Seeds. Adjuvan, ...	Quarters,	5,585
Seeds. Castor, ...	do.	1,489
Seeds. Coriander, ...	do.	31,089
Seeds. Cummin, ...	do.	88,977
Seeds. Fenegreek, ...	do	29,166
Seeds. Fennel, ...	do.	7,161
Seeds. Gingely, ...	do.	30,829
Seeds. Mustard, ...	do.	21,610
Seeds. Other sorts, ...	Value Rs.	13,307
Sharkfins, ...	Cwt.	1,218
Shawls—Cashmere, ..	No.	11,341
Silk. Silk Raw—British, ...	lbs.	3,39,559
Silk. Do. Foreign, ...	do.	11,933
Silk Piece Goods. British, ...	Pieces, Yards,	2,03,203
Silk Piece Goods. Foreign, ...	Pieces, Yards,	34,918
Silk Piece Goods. Velvet—British, ...	Pieces, Yards,	3,854
Shoe Blacking, ..	Value Rs.	1,943
	Carried forward, ...	2,09,41,598

Articles.	IMPORTS.	*Rs.*
	Brought forward, ..	2,09,44,598
Soap, ...	... Value Rs.	21,825
Soda Water,...	Dozens,	2,312
Spectacles, ...	.. Value Rs.	5,021
Spices. Cardamums, ...	lbs.	26,147
Spices. Cassia, ...	do.	4,969
Spices. Chillies, ...	do.	3,282
Spices. Cinnamon, ...	do.	910
Spices. Cloves, ...	do.	46,424
Spices. Ginger, ...	do.	56,758
Spices. Mace, ...	do.	10,941
Spices. Nutmegs, ...	do.	20,084
Spices. Pepper, ...	do.	50,335
Spices. Do. Long, ...	do.	42,010
Spices. Other sorts, ...	Value Rs.	7,900
Spirits. Arrack, ...	Gallons,	3,597
Spirits. Brandy, ...	do.	1,65,970
Spirits. Gin, ...	do.	18,576
Spirits. Old Tom,...	do.	3,462
Spirits. Rum, ...	do.	4,754
Spirits. Whiskey, ...	do.	2,756
Spirits. Other sorts, ...	do.	3,321
Sugar and Loaf Sugar,.. ...	Cwt.	96,853
Do. Candy, ...	do.	17,376
Tea, ...	lbs.	97,109
Timber and Planks. Teak, ...	...Value Rs.	12,44,188
Timber and Planks. Other sorts, ...	... do.	2,98,448
Tobacco. Manufactured, ...	No. / lbs.	9,789
Tobacco. Unmanufactured, ..	... do.	2,21,647
Toys,...	Value Rs.	25,478
Trunks and Boxes, ...	... do.	3,972
Umbrellas, ...	No.	57,265
Wax and Wax Candles, ...	... lbs.	61,200
Wines. Cape, ...	Gallons,	14,553
Wines. Champagne, ...	... do.	26,726
Wines. Cherry Brandy, ...	do.	1,781
Wines. Claret—English, ...	... " do.	9,575
Wines. Do. French, ...	do.	41,593
Wines. French, ...	... do.	169
Wines. Curracoa, ...	do.	618
	Carried forward, ..	2,36,74,292

	Articles.	IMPORTS.	*Rs.*
		Brought forward, ...	2,36,74,292
Wines.—Continued.	Ginger, ...	Gallons,	4,934
	Hock, ...	do.	5,154
	Lisbon, ...	do.	3,199
	Madeira...	do.	21,745
	Marasquino, ...	do.	404
	Marscella, ...	do.	1,844
	Moselle, ...	do.	2,353
	Noyeau, ...	do.	220
	Port, ...	do.	56,179
	Sauterne,...	do.	612
	Sherry, ...	do.	1,37,673
	Other sorts, ...	do.	23,244
Woods.	Sandal, ...	Cwt.	10,516
	Sappan, ...	do.	1,673
	Other sorts, ...	... Value Rs.	73,494
Wood Screw, ...	... ...	do.	18,632
Wool, ...	.. ...	lbs.	1,578
Worsted Yarn,	... ..	do.	1,268
Woollens.	Alpacca, ...	Pieces, Yards,	25,687
	Army Cloth, ...	Yards,	1,665
	Baize, ...	do.	6,400
	Billiard Cloth, ...	Pieces, Yards,	555
	Blankets, ...	Pieces, Yards,	19,874
	Blue Cloth, ...	Pieces, Yards,	16,257
	Broad Cloth, ...	Pieces, Yards,	1,16,722
	Bunting,...	Pieces,	6,842
	Carpets, ...	do. Yards,	4,368
	Carriage Cloth, ...	Pieces, Yards,	3,858
	Circassian Cloth, ...	Pieces, Yards,	6,632
	Coburg, ...	Pieces, Yards,	1,489
	Crimson Cloth, ...	Pieces,	3,000
	Davalies,...	do.	2,181
		Carried forward, ...	2,42,49,544

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	Articles.	IMPORTS.	*Rs.*
		Brought forward, ...	2,42,49,544
Woollens.—Continued.	Doeskins, ...	Pieces, Yards,	25,200
	Drab Cloth, ...	Pieces, Yards,	699
	Filter „	do.	3,400
	Flannel, ...	Pieces, Yards,	91,193
	Gambroons, ...	Pieces, Yards,	3,587
	Green Cloth, ...	Pieces, Yards,	921
	Medium „	Pieces, Yards,	2,897
	Merino, ...	Pieces, Yards,	4,509
	Orleans, ...	Pieces, Yards,	4,489
	Scarlet Cloth, ...	Pieces, Yards,	15, 961
	Serge, ...	Pieces, Yards,	7,116
	Shawls, ...	No.	7,831
	Tweeds, ...	Pieces, Yards,	22,246
	Worsted, ...	Pieces, Yards,	10,552
	Other sorts, ...	Value Rs.	85,505
Sundries,	... ...	do.	1,49,803
	Total Merchandize, ...	...	2,46,85,453
Treasure.	Gold, ...	..	46,34,989
	Silver, ...	...	1,39,86,923
	Copper, ...	...	1,250
	Total Treasure, ...	..	1,86,23,162
Total Merchandize & Treasure, ...		...	4,33,08,615

EXPORTS.

	Articles.		*Rs.*
Apparel.	Boots and Shoes,	Value Rs.	12,539
	Gold Thread and Lace,	do.	160
	Haberdashery,	do.	43
	Hats and Caps,	do.	691
	Hosiery,	do.	1,052
	Millinery,	do.	5,745
	Wearing Apparel,	do.	51,415
	Do. Military,	do.	3,090
Arms and Ammunition,		do.	3,450
Bangles,		do.	150
Beads,		do.	3,752
Billiard Tables,		do.	1,000
Books and Stationery.	Books,	do.	15,143
	Stationery,	do.	4,986
	Do. On Company's Acct.	do.	10,000
Bones,		Cwt.	16,238
Cabinet Ware,		Value Rs.	14,372
Carriages,		do.	9,550
Cattle.	Bullocks,	No.	57,159
	Horses,	do.	19,180
	Sheep,	do.	40,764
Chanks,		Value Rs.	65,956
Coffee,		lbs.	8,67,041
Cotton Wool,		do.	87,71,724
Cotton Goods.	Cotton Twist and Yarn,	do.	16,401
	Thread,	do.	931
	Piece Goods—Dyed,	Pieces, Yards,	8,51,727
	Do. Plain,	Pieces, Yards,	9,02,388
	Do. Printed,	Pieces, Yards,	3,33,109
Dregs of Gingely Oil,		Cwt.	46,182
Drugs.	Aloes,	do.	1,507
	Camphor,	lbs.	1,786
	Coculus Indicus,	Cwt.	1,311
	Cuscus Root,	do.	1,779
	Gallingal,	do.	1,803
	Garlic,	do.	21,505
	Kaude Sequc Checke,	do.	1,276
	Myrabolanes,	do.	17,536
	Nux Vomica,	do.	1,317
	Senna,	do.	36,189
	Zedore, Zerumbeth,	do.	1,721
	Other sorts,	Value Rs.	9,921
		Carried forward, ...	1,22,23,589

Articles.	EXPORTS.		*Rs.*
	Brought forward, ...		1,22,23,589
Dyes. Catechu or Terrajaponica, ...	Cwt.		28,046
Dyes. Indigo, ...	lbs.		38,59,826
Dyes. Turmeric, ...	Cwt.		3,72,476
Embroidery, ...	Value Rs.		60
Eppapindy, ...	Cwt.		27,621
Feathers, ...	No.		42,686
Firewood, ...	Value Rs.		14,129
Fishmaws, ...	Cwt.		3,959
Fruits and Nuts. Betel Nut—Boiled, ...	do.		2,61,319
Fruits and Nuts. Do. Raw, ...	No. / Cwt.		2,23,594
Fruits and Nuts. Cocoanut, ...	No.		3,52,930
Fruits and Nuts. Do. Kernels, ...	Cwt.		3,97,868
Fruits and Nuts. Dates, ...	do.		1,190
Fruits and Nuts. Tamarind, ...	do.		9,761
Fruits and Nuts. Other sorts, ...	Value Rs.		4,215
Fuller's Clay, ...	Cwt.		15,416
Goolal Powder, ...	Value Rs.		7,520
Glassware. Bottles, ...	do.		2,946
Glassware. Other sorts, ...	do.		4,649
Grinding Stones,...	do.		1,906
Grocery, ...	do.		50
Grain. Anoomooloo, ...	Qrs.		148
Grain. Caramunloo, ...	do.		4,518
Grain. Condooloo, ...	do.		2,285
Grain. Dholl, ...	do.		16,867
Grain. Horse Gram, ...	do.		55,349
Grain. Menoomooloo, ...	do.		9,988
Grain. Natcheny, ...	do.		2,936
Grain. Paddy, ...	do.		3,76,077
Grain. Pease, ...	do.		18,565
Grain. Pessaloo, ...	do.		30,111
Grain. Rice, ...	do.		57,74,071
Grain. Sanagaloe, ...	do.		4,82,141
Grain. Wheat, ...	do.		95,016
Grain. Other sorts, ...	Value Rs.		7,829
Gums of sorts, ...	do.		931
Gunnies and Gunny Bags, ...	No.		15,795
Hides. Tanned, ...	do.		10,34,347
Hides. Untanned, ...	do.		11,67,649
Honey, ...	Cwt.		1,438
Horns, ...	No. / Cwt.		1,25,378
Hooka Shells, ...	Value Rs.		5,638
Instruments—Band, ...	do.		1,500
Ivory and Elephant's Teeth, ...	do.		5,561
Ivory Ware, ...	do.		43
	Carried forward, ..		2,70,89,937

Articles.	EXPORTS.		*Rs.*
	Brought forward, ...		2,70,89,937
Ivory Work Boxes, ...	Value Rs.		2,807
Jewellery. Clocks and Watches, ...	do.		2,775
Jewellery. Other sorts, ...	do.		10,590
Lac—Stick, ...	Cwt.		1,239
Machinery, ...	Value Rs.		1,000
Malt Liquors, ...	Gallons,		6,828
Manufactured Metals. Brassware, ...	Value Rs.		9,854
Manufactured Metals. Hardware, ...	do.		1,099
Manufactured Metals. Ironware, ...	do.		865
Manufactured Metals. Platedware, ...	do.		6,900
Manufactured Metals. Silver Plate, ...	do.		3,465
Manufactured Metals. Silverware, ...	do.		630
Manufactured Metals. Other sorts, ...	do.		2,660
Mats, ...	do.		14,083
Medicines, ...	do.		3,114
Medical Stores—On Co.'s Acct, ...	do.		19,334
Metals. Copper. Bolt and Ingot, ...	Cwt.		60
Metals. Copper. Old, ...	do.		670
Metals. Copper. Sheet, ...	do.		105
Metals. Iron. Bar and Bolt, ...	do.		48,852
Metals. Iron. Hoop, ...	do.		696
Metals. Iron. Pig, ...	do.		19,185
Metals. Brass, ...	do.		1,821
Metals. Composition Metals, ...	Value Rs.		4,000
Metals. Steel, ...	do.		59
Metals. Quicksilver, ...	do.		3,492
Metals. Tin, ...	do.		2,500
Metals. Other sorts, ...	do.		2,502
Military Stores. On Co.'s Acct.	do.		1,52,350
Military Stores. „ Private do.	do.		1,904
Molasses or Jagree, ...	Cwt.		3,39,986
Do. Palmirah, ...	do.		7,430
Musical Instruments, ...	Value Rs.		4,481
Naval Stores. Coir and Coir Rope, ...	Cwt.		3,14,646
Naval Stores. Do. On Company's Acct., ...	do.		24,600
Naval Stores. Hemp, ...	do.		49,469
Naval Stores. Pitch, Tar and Dammer, ...	do.		569
Naval Stores. Other sorts, ...	Value Rs.		6,127
Oils. Cassia, ...	Gallons,		7,076
Oils. Castor, ...	do.		12,838
Oils. Cocoanut, ...	do.		6,11,706
Oils. Eloopah, ...	do.		751
Oils. Fish, ...	do.		83,636
Oils. Gingely, ...	do.		21,702
Oils. Lamp, ...	do.		36,533
	Carried forward, ...		2,89,36,926

Articles.	EXPORTS.	*Rs.*
	Brought forward, ...	2,89,36,926
Oils.—Continued. Linseed,	Gallons,	3,884
Manilla, ...	do.	1,07,961
Margosa,	do.	259
Pinnay, ...	do.	2,797
Other sorts,	Value Rs.	3,193
Oilmanstores, ...	do.	4,974
Paints & Colors—White Lead,	Cwt.	10
Perfumery—Sandal Oil,	lbs.	64,280
Pipe Staves and Casks,	do.	5,295
Pictures and Portraits,	do.	2,883
Porcelain and Earthenware,	do.	7,468
Precious Stones. Diamonds,	do.	49,650
Garnets,	do.	7,280
Pearls, ...	do.	12,500
Rubies,	do.	97,111
Other sorts,	do.	1,755
Printing Materials,	do.	12
Provisions. Arrow Root,	Cwt.	45,220
Confectionery,	Value Rs.	895
Flour,	Cwt.	28,018
Fresh,	Value Rs.	72,409
Ghee,	Cwt.	1,27,838
Salted,	Value Rs.	68,072
Other sorts,	do.	5,773
Rattans and Canes—Bamboos,	do.	14,351
Reeds, ...	do.	2,127
Saddlery,	do.	1,280
Salt. On Company's Acct.,	lbs.	23,899
,, Private do.	do.	45,362
Saltpetre, ...	Cwt.	1,27,310
Seeds. Agseh,	Quarters,	1,05,633
Coriander,	do.	14,206
Cotton,	do.	3,971
Croton,	do.	1,413
Cummin,	do.	15,149
Fenegreek,	do.	7,913
Fennel,	do.	3,191
Gingely,	do.	23,60,255
Indigo,	do.	97,770
Lamp Oil,	do.	1,73,865
Linseed,	do.	25,444
Manilla,	do.	52,617
Mustard,	do.	77,699
Naigree,	do.	384
Poppy Seeds,	do.	1,370
	Carried forward, ..	3,28,11,672

Articles.	EXPORTS.		*Rs.*
	Brought forward, ...		3,28,11,672
Seeds.—Continued. Rape,	... ...	Quarters,	5,100
Valasaloo,	... ...	do.	7,195
Other sorts,	... ...	Value Rs.	6,385
Sharkfins,	... ...	Cwt.	36,696
Shawls—Cashmere,	... ...	Pieces,	2,451
Silk, Raw,—British,	... ...	lbs.	1,42,860
„ Piece Goods—British,	... ...	Pieces, Yards.	11,524
Do. Foreign,	... ...	Pieces,	2,050
„ —Carpet,	... ...	do.	175
Soap,	... ...	Cwt.	1,26,512
Sodawater,	... ...	Value Rs.	24
Spices. Cardamums,	... ...	lbs.	4,54,195
Cassia,	... ...	do.	11,196
Do. Buds,	... ...	do.	4,180
Chillies,	... ...	do.	89,798
Cinnamon,	... ...	do.	5,559
Ginger,	... ...	do.	80,907
Mace,	... ...	do.	3,413
Nutmegs,	... ...	do.	622
Pepper,	... ...	do.	12,18,244
Other sorts,	... ...	Value Rs.	866
Spirits. Arrack,	... ...	Gallons,	1,067
Brandy,	... .	do.	3,540
Gin,	... ...	do.	690
Rum,	... ...	do.	48,721
Whiskey,	... ...	do.	462
Other sorts,	... ...	Value Rs.	336
Sugar,	... ...	Cwt.	37,37,118
Do. Candy,	... ...	do.	1,712
Tallow,	... ...	do.	9,196
Tea,	... ...	lbs.	13,698
Timber and Planks. Poon,	... ...	Value Rs.	37,206
Teak, On Co.'s Acct.,	... ...	do.	23,983
„ Private do.	... ...	do.	2,92,522
Other sorts,	... ...	do.	8,729
Tobacco. Manufactured,	... ...	No. lbs.	45,419
Unmanufactured,	... ...	do.	2,13,923
Tortoiseshells,	... ...	Value Rs.	1,823
Toys,	... ...	do.	3,182
Trunks and Boxes,	... .	do.	3,211
Umbrellas,	.. ..	No.	3,592
	Carried forward, ..		3,94,71,754

	Articles.	EXPORTS.	*Rs.*
		Brought forward, ...	3,94,71,754
	Wax and Wax Candles,	... ... lbs.	1,03,041
	Do. Vegetable,	... ... do.	19,513
Wines.	Champagne, ...	... ... Gallons,	540
Wines.	Claret, ...	.. ... do.	828
Wines.	Madeira, ...	... ... do.	3,178
Wines.	Port, ...	... ... do.	6,873
Wines.	Sherry, ...	... .. do.	4,941
Wines.	Other sorts,	.. ... Value Rs.	1,708
Woods.	Black,.. ..	... ... do.	38,558
Woods.	Ebony, ...	... ... do.	4,500
Woods.	Jungle, ...	... ... do.	1,72,520
Woods.	Red, ...	... ... Cwt.	1,25,789
Woods.	Sandal, ...	... ... do.	1,12,827
Woods.	Sapan, ...	... ... do.	71,175
Woods.	Other sorts,	... ... Value Rs.	1,090
	Woodenware, ...	.. ... do.	3,035
	Wool, ...	... ... lbs.	28,569
Woollens.	Blankets, ...	... ... Pieces, / Yards,	11,165
Woollens.	Carpets, ...	... ... Pieces, / Yards,	26,331
Woollens.	Cumblies, ...	... ... Pieces,	10,069
Woollens.	Flannel, ...	... ... ,, / Yards,	290
Woollens.	Shawls, ...	... ... Pieces,	135
Woollens.	Other sorts, ...	... ... Value Rs.	5,889
	Sundries, ...	... ... do.	1,40,843
	Total Merchandize,	... ...	4,03,65,161
Treasure.	Gold, ...	... ...	78,450
Treasure.	Silver. On Company's Acct.,	...	24,22,016
Treasure.	Silver. ,, Private do.	... ...	90,51,006
Treasure.	Copper. ,, Company's do.	...	1,48,914
Treasure.	Copper. ,, Private do.	... ...	480
	Total Treasure, ...	... ...	1,17,00,866
	Merchandize and Treasure,	... ...	5,20,66,027

THE

ANNALS

OF

INDIAN ADMINISTRATION.

A HISTORY OF ARABIA FELIX OR YEMEN.

Bombay Records, No. XLIX.—New Series.

Captain R. L. Playfair, the First Assistant Political Resident at Aden, has prepared this work, in consequence of the wish of the Government of Bombay to publish a series of selections from its records, illustrative of the History of Aden since its occupation by the British. The work takes up the History of Yemen since the beginning of the Christian era. The author has arranged in chronological order all the materials he has been able to collect on the subject, as contributions towards a regular history.

Yemen Proper, the Arabia Felix of the ancients, forms the southern portion of the Arabian peninsula, and is bounded on the south by the Gulf of Aden, on the west by the Red Sea, on the north by the Hejaz and the Desert of Ahkaf and on the east by the province of Hadramaut. Of its divisions the Tehama or low country is parallel to the sea-coast, and extends from the Gulf of Akaba to the Straits of Bab-el-Mandeb. It again is sub divid- into the Tehamas of the Hejaz and of Yemen, the latter varying in breadth from 30 to 80 miles, and chiefly a recent recovery from the sea. There is a want of springs and of rain, but the heavy dews refresh the parched soil. It is the interior or northern hilly division that, by the fertility of its soil, the beauty of its landscape and the salubrity of its climate, has merited the title—'Happy'. Yemen is divided into the following provinces, which are also, as nearly as possible, its great political divisions:—"1, Aden; 2, The Tehama; 3, Sanaa; 4, Lahej; 5, Kaukeban; 6, Belad-el-Kabail, or Hashid-we-Bekeel; 7,

Aboo Areesh; 8, a large district between Aboo Areesh and the Hejaz, inhabited by free Bedouins; 9, Khaulan; 10, Sahan, including the principality of Saadeh; 11, Nejran; 12, Nehm; 13, East Khaulan, consisting of several small principalities; 14, Belad-el-Jehaf, or Mareb; and 15, Yaffa.

"The British settlement of Aden, which is almost the most southerly point on the Arabian coast, is situated in latitude 12° 47′ North, and longitude 45° 10′ East. It is a peninsula of about fifteen miles in circumference, of an irregular oval form, five miles in its greater, and three in its lesser diameter, connected with the continent by a low narrow neck of land, 1,350 yards in breadth, but which is in one place nearly covered by the sea at high spring tides. It consists of a large crater, formed by lofty and precipitous hills, the highest peak of which has an altitude of 1,775 feet: these, on the exterior sides, slope towards the sea, throwing out numerous spurs, which form a series of valleys, radiating from a common centre. The town and part of the military cantonments are within the crater, and consequently surrounded on all sides by hills, save on the eastern face, where a gap exists, opposite the fortified island of Seerah."

Aden.—The inlet caused by this gap is termed Front or East Bay. The rents produced by the cleaving of the crater from north to south, are called the Northern and Southern Passes. The former, better known as the Main Pass, is the only entrance into the town from the interior or harbour. The harbour is three miles wide at the entrance, and affords the best shelter, of any on the Arabian or adjacent African coasts, for vessels which do not draw more than 20 feet of water. Aden is not entirely destitute of vegetation; it has good water but in limited quantities. It possesses about 150 wells, of which 50 are potable, and yield an aggregate quantity of 15,000 gallons a day. They are sunk in the solid rock to a depth of from 120 to 185 feet. The oldest does not date further back than A. D. 1500, previous to which period the place was supplied by reservoirs and an aqueduct from the interior. These reservoirs, which abound throughout Yemen, were probably commenced about the 2nd Persian Invasion, in A. D. 600. Within the last three years their restoration has been undertaken, and thirteen have been completed. They are used to store the rain water. The annual fall of rain in Aden seldom exceeds 6 or 7 inches; as this yields an insufficient supply, a condensing apparatus is about to be erected. The climate from October to April, the north-east monsoon, is cool and agreeable, during the rest of the year the *shamal*, or north, hot, sandy wind, prevails. Severe forms of tropical disease are not common, and cholera is almost unknown. The scourge has occurred only twice there. The most prevalent disease is the

Yemen ulcer, which chiefly attacks the poor. Scurvy is prevalent owing to the saline quality of the water. The army of Ælius Gallus, which invaded Arabia 30 B. C. was delayed for nearly a year at Leuke Kome by this malady. Small-pox has been lessened by vaccination. A terrible species of leprosy is common, especially amog the servile races known as Khadim and Hoojeree. "Aden was anciently one of the most celebrated cities of Arabia, and owed its riches and importance to being the general entrepot of the great carrying trade which existed between India, Persia, Arabia, and Africa, and the various nations of Europe, Egypt, and Phœnicia. Ships from the East conveyed the treasures of their respective countries thither, for transmission up the Red Sea, by means of smaller craft, to the ports of Egypt; rich caravans brought to it the produce of the thuriferous regions, and merchants from all parts of the East and West formed there commercial establishments, and imported the goods of their various lands, either for consumption in the country or to be forwarded to the further East. The author of the *Periplus of the Erythræan Sea* informs us that, shortly before his time, Arabia Felix, or Aden, had been destroyed by the Romans; and Dean Vincent is of opinion that the Cæsar in whose reign this event took place was Claudius."

In the time of Constantine, Aden recovered its former splendour and was called Romanum Emporium. The Venetian officer, who chronicles the expedition of Suleiman Pasha to India in 1538, describes Aden. It continued to monopolise the Indian trade till the Portuguese opened the Cape route to India. In 1708 M. de Merveille, leader of an expedition sent out to the Red Sea by a French commercial company of St. Malo, landed there, and found the town surrounded by high walls and strengthened by batteries of brass guns left by the Turks. Mr. Salt describes the city in 1809 as of considerable importance as a place of trade. It was the chief mart for the gums brought over by the Somálie traders from the North-east districts of Africa. Good coffee was procurable. Aden was at its lowest when Captain Haines, of the Indian Navy, visited it in 1835. He described it as "a wretched village built on the ruins of an ancient city," with a population of from 500 to 600 and a revenue of 12,000 dollars annually. It was subject to the Sultan of Lahej who left it under the joint management of a Governor and Collector of Customs. Since the conquest in 1839, "its rise has been rapidly progressive." "A neat and well-built town has superseded the former miserable village; the population has increased from 500 to 25,000; while the value of the trade, including imports and exports, amounts to upward of a million sterling per annum. This highly satisfactory result is owing to the security afforded

under the British flag to property and person, and the wise policy of the Indian Government in declaring it a free port.

"The trade for the official year ending 31st May, 1858, was as follows:—

Imports,—Goods,...	Rs.	47,78,677	
Treasure,...	,,	22,41,798	70,20,475
Exports,—Goods, ...	,,	28,36,374	
Treasure, ...	,,	15,98,674	44,35,048
Grand Total, ...	Rupees,		1,14,55,523

"This, compared with the preceding year, exhibits an increase of Rs. 26,30,698 during the year 1857-58."

Curious coins are frequently found after the heavy rains, and on one occasion a Himyaritic inscription was discovered twenty feet below the level of the present town, supposed to be a commemorative tablet. The place has been entirely re-fortified, so that nothing short of a large European army and fleet could succeed in reducing it. The population in 1856 was as follows:—

"Christians, ...	1,129
Indian Mahomedans, ...	2,557
Arabian ditto, ...	4,812
African ditto, ...	3,627
Other ditto, ...	58
Hindoos, ...	5,611
Parsees,...	61
Jews, ...	1,224
Miscellaneous, ...	1,659
Total, ...	20,738"

The Indian Mahomedans are chiefly those who are either going to or returning from Mecca. Most of the African Mahomedans are Somalies, who are a purely nomadic race. They are lazy and good-tempered, and inveterate thieves. Amongst the 'Miscellaneous' are the Akhdam, signifying slave or servant, and thereby denoting that this race is politically and socially inferior to the native Arab. They are the Pariahs of Yemen, where only they are found. They follow the most servile occupations. Some suppose them to be the remnants of the ancient Himyarites, others the descendants of the Persian conquerors of Yemen. More probably they are the descendants of the Abyssinians who, when the Arabs conquered the country, were reduced by them to the condition of serfs. The Hindoos, are sepoys, banians, or

workmen in the Engineer department. The Jews have existed in Aden since the Captivity, ruling over the Arabs until the introduction of the Mahomedans. They number 2,00,000 souls in Arabia. They are filthy, but industrious.

Perim.—This island is attached to the Government of Aden. "It is called by the author of the *Periplus* the island of Diodorus, and is known amongst the Arabs as Mayoon. It is situated in the Straits of Bab-el-Mandeb, a mile and a half from the Arabian, and eleven miles from the African coast. The formation is purely volcanic, and consists of long, low, and gradually sloping ranges of hills, surrounding an excellent and capacious harbour, about a mile and a half in length, half a mile in breadth, and with a varying depth of from four to six fathoms in the best anchorages."

The highest point is 245 feet above the level of the sea. It is supplied with water from Aden. Albuquerque landed on it in 1513 and called it Vera Cruz It was then occupied by pirates. In 1799 Lieutenant Col. Murray was sent from Bombay with a force to take possession of it, with the view of preventing the French troops in Egypt from reaching India to effect a junction with Tippoo. But, as the straits were too broad to be commanded by batteries on the shore, it was abandoned as a military position. The necessities of navigation now demand the erection of a Lighthouse, wherefore the island was re-occupied in the beginning of 1857. "The only other British possessions in the vicinity of Arabia are the Massah Islands, in the Bay of Tajoorah, the Island of Eibat, near Zailah, and the Curia Muria Islands, on the Mahra Coast of Arabia The two first were purchased by the British in 1840, but have never been occupied, and the last was ceded by the Imam of Muscat in 1854; they are only valuable for the guano deposits which are found upon them."

The Tehama.—"The second great political division of Yemen is the Tehama, which extends, with a varying breadth of from twenty to eighty miles, along the whole sea-coast of that province washed by the Red Sea. It is now an integral part of the Turkish empire, but contains many chieftains, whose authority over their immediate clansmen is not entirely ignored. With the exception of Aden, it is the only part of Yemen which has ever submitted to a foreign yoke since the era of the Hejira. The principal cities in this district are Hodaida, Lohea, Mokha, and Jezan on the sea-coast, and Zebeed and Bait-el-Fukeeh in the interior. The Strait of Bab-el-Mandeb, which forms the entrance of the Red Sea, is the limit of the Turkish possessions to the south. The name signifies 'the gate of affliction,' and is supposed to express the dangers which formerly attended its navigation."

This passage is 14½ miles broad, with the island of Perim in the middle. Near the point of land on the Arabian coast is Ras Bab-el-Mandeb, where Captain Playfair discovered in 1857 the remains of the ancient city of Okelis, the sea-port of the Catabeni, and long the centre of commerce between Europe and the East. The first city within the straits on the sea-coast is Mokha, which rose to importance on the discovery of the use of coffee in the 15th century. The third great outlet for the produce of the country in ancient times was Mooza, but Aden gradually absorbed the trade of these three. About the beginning of the seventeenth century the English and Dutch East India Companies established factories at Mokha; the revenues of the port amounted to 37,500 dollars per annum. In the beginning of the eighteenth century the French also established a factory, and in 1803 the Americans began to trade in the Red Sea. This prosperity continued unabated till 1839, when Aden became a British port. At present Mokha is in a most deplorable condition. The Turkish possessions in Arabia are now so badly governed that they do not pay their own expenses. Hodaida is now the most flourishing of the Turkish ports in Yemen and the residence of the Pasha who is the Governor Lohaia is another rising port, four centuries old. Between it and the former is the island of Kamaran, on the eastern side of which there is secure anchorage to which vessels passing between Jedda and India frequently resort for wood and water. Jezan, Zebeed, Ghasana, Rouais, Shoorjeh, and Bait-el-Fukeeh are towns and villages remarkable for their trade or their sanctity.

Sanaa.—"The district of Sanaa is very undefined in extent, but includes the country round the city to a distance of half a day's journey on the west, north, and east; and is bounded on the south by the Tehama and the districts of Lahej and Yaffa. The city of Sanaa, the capital of Yemen, is situated in a deep valley, about twenty or thirty miles in length, and six or seven in breadth, and four thousand feet above the level of the sea. This valley is bounded on the east by a high range of mountains, called Jebel Nikkum, and is studded all along with large villages."

The public baths, at the time Niebuhr visited the city, were twelve in number. "According to the estimate of the Rev. Mr. Stern, who visited Sanaa in 1856, the city contains about 40,000 inhabitants, of whom 22,000 are Mahomedans, and 18,000 Jews. There was formerly a large colony of banians, but these have almost entirely left the country; Mr. Stern only heard of three, of whom two were murdered during his stay there." The principal trade is in coffee, fruits and iron. Mr. Cruttenden found some Himyaritic inscriptions. After deposing their legi-

timate sovereign, the merchants elected a ruler of their own body. Two and a half miles north-west is Jeraf, and beyond that the town and mount of Amran. To the south is the ancient town of Doran. Yereem was a royal residence for the Himyarite kings. To the south-east is the city and castle of Dthamar, where Niebuhr found a large University.

Lahej.—This province is the principality of Aden. "It is the most southern part of Yemen, and extends along the sea-coast from the Straits of Bab-el-Mandeb on the west to about eighty miles east of Aden, and reaches nearly as far north as Ta'ez. The most important tribes occupying this territory are the Soobaiha, Abdali, Foudtheli, and Houshebi."

The Soobaihas are the gipsies of Arabia. The Abdali is the wealthiest but least warlike tribe. The capital, usually styled by the Europeans Lahej, is called by the natives *El-Howta.* It is thirty miles to the north-west of Aden and contains above 5000 inhabitants. The chief produce of the country is jowaree and toddy—the latter a fermented liquor extracted from the Doom or Theban palm.

Kaukeban is the fifth province into which Yemen has been divided; its soil is of various degrees of fertility. The eighth is a plain extending along the Red Sea for the space of a degree west. Khaulan, Sanhan, the valley of Nejran, the small district of Kahtan, and East Khaulan and Mareb are also divisions. The fifteenth and last division is Yaffa, the people of which are the most powerful tribe in Yemen. Each of its seven Chiefs can muster seven thousand fighting men. They have been most friendly to the British since the *Palinurus* surveyed the coast of Arabia prior to the conquest of Aden.

After this general description of Yemen, Captain Playfair devotes several chapters to its history form the Christian era. Then the Himyarite dynasty, so called from Himyar, fifth monarch of the race from Kahtan (the Bible Jocktan) which had ruled over the country for many centuries, was on the decline. The Emperor Augustus in B.C. 24, six years after Egypt had become a Roman province, sent an expedition under Ælius Gallus to explore Arabia and Ethiopia. After much sickness and loss he reached Nera and thence crossed the Gulf to Myos Hormos. After two years' absence he brought back the miserable remains of his army. Dthoo'l Adhar was king of Yemen at that time. The reign of Queen Balkees very nearly coincides with the commencement of the Christian era. She repaired the famous dam of Mareb said to have been constructed by Lockman, king of the Second Adites B. C. 1750. The following is a list of the monarchs from Queen Balkees :—

Yasir.

Shammir Yerash, who gives his name to Samarcand which he conquered, and made an expedition to China in which he perished.

Aboo Malik.

Zaid, in whose days the dam of Mareb gave way, mentioned in the Koran as the *Sail-el-Arem* or rush of water from the reservoir.

Dthoo Habshan from A. D. 140 to 150.

Tobba to A. D. 180.

Kali Karib to A. D. 200.

Aboo Karib to A. D. 236 mentioned in the Koran chapters 44 and 50. He became a convert to Judaism, and died on an expedition to conquer India.

Hassan Tobba to A. D. 250.

Amr-el-Mauthaban to A. D. 270.

Abdhaa.

Abd-Kelal, is said to have embraced Christianity. "It is difficult to assign the precise era at which Christianity was introduced into Arabia; it is the universal belief of the eastern churches that St. Thomas preached in Arabia Felix and Socotra on his way to India (about A. D. 50), where he suffered martyrdom; and it is said that the rudiments of the religion of the cross were first implanted amongst the Himyarites by St. Bartholomew. It is also recorded that St. Pantænus was sent by Demetrius, bishop of Alexandria, to preach in Arabia Felix, and that he there found traces of the labours of St. Bartholomew,—amongst others, a copy of St. Matthew's Gospel, written in the Hebrew character, which he brought away with him to Alexandria. But it was not till the next reign, that of Tobba, the son of Hassan, from A. D. 297 to A. D. 320, that Christianity seems to have made any considerable progress, or its existence to have been generally known in Arabia."

Harith.

Marthad.—"It is supposed that it was to this prince the Emperor Constantius sent an embassy about A. D. 342, headed by Theophilus Indus, an Indian bishop, and a native of the island of Diu."

Walia.

Abraha.

Sahban.

Sabbah.

Hassan Dthoo Moaher.

Dthoo Shenatir.

Dthoo Nowas, who became a convert to Judaism and persecuted the Christians.

The Christian king of Abyssinia, called by the Greeks Elisbaas and by the Ethiopians Caleb, at the request of

Justin I. invaded Yemen and defeated Dthoo Nowas in A. D. 525, taking vengeance for his cruelties to the Christians. Aryat commanded the Abyssinian army. "Thus terminated the Himyarite dynasty, which had ruled in Yemen for two thousand years. Its power had long been on the decline, but its downfal was accelerated by the intolerance of the Jewish Tobbas, which induced them to persecute with unrelenting fury the disciples of Jesus."

Yemen was occupied by the Abyssinians from A. D. 525 to 573, during which time the chief character is Abraha who slew Aryat, oppressed the Himyarites, and encouraged Christianity to the overthrow of the worship of the Kaaba. This enraged the Koraish who slew the missionaries sent to them. Accordingly Abraha invaded Mecca on a famous white elephant, but was miraculously defeated with all his force by birds in A. D. 570, the year in which Mahommed was born. On the death of Abraha of a loathsome disease he was succeeded by his son Yascoom and he by his brother Masrook, the last of the Abyssinian kings of Yemen.

The last of the old Himyarite race were Saif and Maadi-Karcb, his son, and they resolved to seek the assistance of Kesra, the king of Persia. He sent an army under Wahraz who defeated Masrook and established the Persian power, which continued till A. D. 622. The Persian rule was mild; the Pagan, Jewish and Christian religions were alike tolerated. At the era of the Hejira, Kesra Parweez was king of Persia, and was deposed by his subjects who raised his son to the throne. Mahommed sent an account of the event to the viceroy at Yemen, pretending that it was revealed to him by inspiration. The latter with his subjects accordingly embraced the religion of El-Islam, and was conformed in his office by the prophet. The Christians were tolerated in the exercise of their religion. The Kalifs appointed a series of Lieutenents in the various provinces of Arabia till A. D. 932, when Yemen threw off its allegiance to them, and a descendant of Ali was placed on the throne. It continued to be ruled by a dynasty of Sultans or Imams from that time till A. D. 1477, when it greatly improved under the wise and beneficent administration to Abd-el-Wahab.

The eagerness of the Portuguese to see Abyssinia, caused by the embassy sent by the so-called Prester John, the king of that country, to the senate of Florence in A. D. 1445, led them to visit Yemen. In 1487 John Pedreio de Covilham and Alphonso de Payva, were sent by John II. of Portugal, to explore Abyssinia. Covilham "went *via* Alexandria, descending the Red Sea, and touching at Tor, Saukin, and Aden, which last he describes as a rich trading town, where he had an opportu-

nity of conversing with merchants of all nations, and from all parts of India. At Aden he embarked for Cannanore, on the Malabar Coast, after which he returned to Africa, touched at Zaila, and went down the East coast as far as Soflaa; then, retracing his steps to Cairo, he met the two Jews, by whom he transmitted an account of the information he had collected to the king. He subsequently returned to Aden, whence he crossed over to Zaila, and thence proceeded to the court of Shoa. He was received with the greatest distinction by Iskender, the reigning prince, but he was never permitted to leave the country. Here he was found by Alvareze, the almoner to the embassy of John de Lima in 1525, who observes that the king had given him a wife and lands, that he was still a brave soldier and a good Christian, and as much beloved by the people as by the king. De Payva had previously perished in his first voyage."

In 1503 one Ludovico de Barthema landed at Aden. The year after a Portuguese vessel appeared for the first time in the Red Sea. In 1506 Albuquerque took the Curia Muria Islands and Muscat. In 1513 at the head of a second expedition he was repulsed in an attempt to capture Aden, but visited Mokha. In 1516 another expedition left Goa under Lope Soarez who succeeded Albuquerque. The Governor of Aden at once surrendered to him, as his defences were in a weak state, but he did not then take possession of the stronghold. On his return he found it strengthened against him, and the Governor refused to give it up. "The Red Sea was first visited by the English in A. D. 1609, when the *Ascension*, a vessel belonging to the East India Company, commanded by Captain Alexander Sharpey, proceeded thither, in the hope of being able to establish commercial relations with Arabia. Captain Sharpey arrived at Aden on the 8th of April. In the following year Admiral Sir Henry Middleton was sent on another trading voyage by the East India Company. He arrived at Aden on the 10th of November."

At Mokha, which he afterwards visited, he and his party were treated most treacherously, and only after a cruel imprisonment were allowed to depart. In 1612 "another expedition, consisting of the ships *Cloue, Hector* and *Thomas*, under the command of Captain John Saris, visited Mokha. Two years after this, a fleet under Van der Broeck was sent for the first time by the Dutch East India Company to the Red Sea, to obtain information regarding the nature of the commerce in those parts." The Dutch after attempting to establish factories at Shehr and Mokha, left for India. In 1618 Captain Shilling was sent in the *Anne Royal* by Sir Thomas Roe to establish a factory at Mokha, and succeeded.

In A. D. 1630 the Portuguese discovery of the route to India

by the Cape having made Yemen no longer a profitable dependency, the Turks yielded to the opposition of the Arabs and withdrew from it. It then fell into the hands of the family of Barakat who claimed descent from Ali ibn Aboo Taleb. Kassim was raised to the dignity of sovereign and the honour continued in his family. In 1708 the French first visited Yemen. A French Company of St. Malo sent the *Curieuse* and *Diligent* to Aden under M. de Merveille. They were well received and in the following year visited Mokha, where they found a Dutch factory established. The French concluded a treaty with the Dowla of Mokha, and in 1711 sent out a second expedition. In 1738 they were compelled to force the Dowla to pay them a heavy debt which he had contracted, and concluded a second treaty on more favourable terms than before. "In A. D. 1762 an expedition was organised by king Frederick V. of Denmark, for the exploration of Arabia, but more particularly of the province of Yemen; it was under the charge of the learned M. Carsten Niebuhr, with whom were associated Professor von Haven, as linguist; Professor Forskal and Dr. Cramer, as naturalists; and M. Baurenfeind, as draughtsman. They arrived in Yemen in the end of December, 1762."

Niebuhr had several interviews with the Imam. He found that his entire revenue averaged 830,000 dollars per annum, and that he maintained a standing army of 4,000 infantry and 1,000 cavalry. "In consequence of the invasion of Egypt by the French, the English Government despatched, in A. D. 1799, a naval force from Great Britain, under the command of Admiral Blanket, to cruise in the Red Sea; and at the same time orders were sent to Bombay, directing the Government of that presidency to secure and fortify the island of Perim." Accordingly in the month of April 300 European and native troops took possession of it, but were forced to abandon it by the absence of fresh water, and the fact that the straits could not be commanded by batteries on the shore. They were received most cordially by the Sultan of Aden.

In the beginning of the present century the British trade with Arabia had dwindled away, most of the coffee finding its way to Europe through Egypt, or by the caravans from Jedda and Mecca to Constantinople. Accordingly the Court of Directors sent Sir Home Popham, commanding H. M. S. *Rodney* to revive the trade, and at the same time to convey troops to co-operate with General Baird's Army then on its way from Bombay to Egypt. After accompanying the General to Cosseir, Sir Home Popham went to Calcutta, where he was regularly constituted Ambassador to the States of Arabia. When he revisited Yemen, he was treated with the utmost indignity. He had sent

Mr. Elliott, the Secretary of the Embassy, Lieutenant Lamb and Dr. Pringle, to Sanaa to conclude a treaty. There Mr. Elliott died, and the others returned without having effected their object. Sir Home formed a treaty, however, with the Sultan of Aden.

Towards the close of 1804 the Southern Wahabies rose against Ali Mansoor, the Imam of Yemen. The Wahabies were a Mahommedan sect of a severe and puritanic faith, who in the middle of the 18th century had seized Mecca and Medina. After continued fighting till 1809, they were defeated. When Lord Valentia visited Yemen in 1805 he found Ali Mansoor a very old man. He was succeeded by his son Ahmed in 1809, who died in 1817. In July of that year Lieutenant Dominicetti of the Bombay Marine, had a dispute at Mokha with the nacoda of a vessel under charter to the East India Company, which resulted in an Arab being detained for a short time at the factory. When the man was released, the factory was attacked by a mob, who ill-used the few sepoys that guarded it, and the Captain of a merchant vessel. After some delay Captain Bruce, the Resident at Bushire, sailed for Mokha A. D. 1820, with a powerful squadron of vessels to demand reparation. The result was at first unsatisfactory, and the port was bombarded and taken. The Sultan yielded to all our demands, reducing the duties to 2¼ per cent. and Lieutenant Robson of the Company's Marine was left in charge with a guard of 30 sepoys. El-Mehdi Abdulla was then Imam. He died in 1834, and was succeeded by his son under the title of El-Mansoor. "Sanaa was visited in 1836 by Mr. Cruttenden, I. N. and Assistant Surgeon Hurton, both attached to the *Palinurus*, then engaged in surveying the coast of Arabia.

"On the 22nd of April, 1841, a mission from the Imam of Sanaa arrived in Aden with valuable presents, the object of which was to request the co-operation of the British by sea, to enable that prince to wrest the ports of the Tehama from the Shereefs of Aboo-Areesh, but the principle of non-intervention in Arab politics, which had been enjoined on the Political Agent, prevented this request being acceded to."

In 1850, Ali Mansoor was defeated by one Ghalib who proclaimed himself Imam. The latest authentic accounts from Sanaa are from the Rev. Mr. Stern, a Missionary who visited it in 1856 to labour chiefly among the Jews. He describes it as in a state of complete anarchy.

Lahej.—In A. D. 1728 the Chief of the Abdali tribe, assisted by the Chief of Yaffa, revolted against the Imam of Sanaa, and seized Aden. Soon the former expelled his colleague and proclaimed himself Sultan of Lahej. His Government was the beginning of the ruin of Aden. He was killed in 1742 and succeed-

ed by his son. The wisest of these Sultans was Ahmed, who began to reign in 1792. He was visited by Mr. Salt in 1809 and by Captain Haines in 1820. Sir Home Popham concluded a friendly treaty with him in 1802. He died in 1827, and was succeeded by his nephew, a deceitful and unscrupulous man.

"In 1829 the Bombay Government, in pursuance of orders from the Court of Directors, relative to steam navigation between England and India, despatched the *Benares* and *Palinurus* to complete the survey of the Red Sea. Some coal was also sent to Aden, and landed on Seerah Island, for the use of the *Hugh Lindsay*, the first steamer built in India, and the first which attempted the navigation of the Red Sea. On the occasion of her first visit to Aden, it was found so difficult to obtain labour, that six days were occupied in taking on board 180 tons of coal. Aden was therefore abandoned, and Makulla was selected as a coaling station for the steamers engaged in the overland communication. Captain Haines, of the Indian Navy, then engaged in the survey of the south-east coast of Arabia, visited Aden in 1835."

In 1836 a Madras ship belonging to the niece of the Nawab of the Carnatic, but sailing under British colours, went on shore a few miles distant from Aden, and was plundered. Her passengers were treated with every indignity. Captain Haines, I. N. was sent in 1837 in a sloop of war to demand redress for this outrage, and if he could not obtain possession of Aden otherwise, to purchase it. The Sultan was forced to give indemnity and on the 23rd of January, 1838, he gave a written bond that he would cede the province to the British for an annual pension of 8,700 dollars. But hearing that treachery was intended we were forced to blockade the place. On the 11th January, 1839 having been reinforced by 300 European and 400 native troops under Major Baillie, the town was taken by assault. "The loss on the side of the British was 15, and on that of the Arabs 150 men, killed and wounded. The garrison consisted of 700 soldiers from the interior, and the remaining population did not exceed 600, of whom a great proportion were Jews. The Sultan, his family, and a number of the chief people of the city, effected their escape to Lahej." Aden was the first capture in the reign of Her Majesty Queen Victoria.

Aden.—On securing Aden Captain Haines at once threw up defences, and formed treaties with the neighbouring tribes and the Sultan himself, whose purchase money, as originally promised, was secured to him so long as he remained faithful. But assisted by the Foudtheli tribe he attempted to retake the place, and so forfeited his pension. The state of affairs in Europe at this period rendered it advisable to obtain certain points on the

African coast. Accordingly Captain Moresby secured by treaty the Mussah Islands situated in the Bay of Tajoorra on the 31st of August, 1839. The British also bought the Bab and Eibat near the same bay. There were frequent attempts to take Aden, and at last the enemy succeeded in securing a position at Nowbat Sheikh Mehdi. Accordingly in October, 1841 a force under Col. Pennycuick was sent to dislodge them, and was successful. "The monthly stipend of the Sultan of Lahej, which had been stopped from the date of his first attack upon Aden, was restored to him in February, 1844, together with one year's back pay, in consideration of his having ceased to molest the British since 1841."

A series of atrocities began to be committed in 1850, which complicated our relations with the Arab tribes for some years. In that year one of a party who had landed from the H. C. steam frigate *Auckland* was killed, and a Madras sepoy assassinated at the Barrier Gate. Next year a party of British officers, on their return from a visit to Lahej with a guard, slept at the village of Wahat. As they slept in a court-yard, a fanatic Seyed killed one and severely wounded other two. Soon after a miscreant attempted to kill Lieut. Delisser as he was riding along the public road between the town and Steamer Point. There were other instances which led the British Government to stop the pension of the Foudtheli Chief, and to blockade the port whose inhabitants had murdered the *Auckland's* sailor. In 1855, however, Sultan Ali of the Abdali came to terms with the Foudtheli, and promised to respect the roads leading to Aden. But as the object of the Sultan was to be at peace with us himself and keep us at war with the other tribes, he still continued to keep matters in an unsettled state. Often Aden was distressed by the want of water and supplies. Accordingly on the 18th March, 1858, an adequate force of artillery, infantry and marines under the command of Brigadier Coghlan, the Political Resident and Commandant, marched against Sultan Ali, who ocupied in force the fort of Sheikh Othman, which commanded all the roads leading into Aden, and supplied the whole cantonment and ships with water. After they had been driven out with a loss of from 30 to 40 men, they demanded peace, and pledged themselves that all the Resident's demand would be conceded. On the following day supplies began to pour into Aden, and though perfect "satisfaction cannot be expected in any future relations with this restless and intriguing Chief, yet it is not probable that, after the lesson he has received, he will lightly proceed to extremities which may lead to its repetition."

The Somali Country.—"Towards the close of A. D. 1854 an expedition was organised at Aden, under the auspices of the Go-

vernment of Bombay, for the purpose of exploring that portion of North-east Africa between Berbera and Zanzibar. The conduct of it was entrusted to Lieutenant Burton, of the Bombay Army, with whom were associated Lieutenant Herne, 1st Bombay Fusiliers, Lieutenant Stroyan, of the Indian Navy, and Lieutenant Speke, of the Bengal Army." All four met at Berbera in April, 1855. There they were attacked by a body of from 150 to 200 well-armed Somalies. "Lieutenant Stroyan was killed ere he could reach his arms; Lieutenant Burton was wounded by a spear, which passed through his cheeks, dividing the palate; Lieutenant Speke was taken prisoner, severely wounded in several places, and escaped almost by a miracle; Lieutenant Herne alone remained unscathed." Their entire property and baggage were plundered. After blockading the whole coast from Siarrah to Jebel Elmas which stopped the entire trade of Berbera during the season 1855-56, and finding that the perpetrators really could not be discovered, the blockade was withdrawn, and a treaty formed with the Elders of the Habr Owel tribe in November, 1856.

Captain Playfair's work concludes with an Appendix containing this treaty, that formed with the Sultan of Lahej in 1849, an engagement with various Chiefs and Elders on the coasts of Arabia and Africa during 1856, and chronological tables of the Imams of Sanaa and the Sultans of Lahej.

THE CONSTRUCTION OF A LIGHT-HOUSE ON THE ALGUADA REEF.

Indian Records, No. XXV.

THE Alguada Reef was described by the Marquis of Dalhousie on his visit to the Arracan Coast in December, 1853, as a "dangerous and dreaded line of rocks to the southward of Cape Negrais, at about ten miles below Diamond Island. It is very low, extends for probably a mile in length, and renders a divergence from the direct course between Calcutta and the Irrawaddy so necessary in common prudence, as to cause the loss of usually half a day in the passage."

On the representation of the Rear Admiral of the station, Government had promised to depute an Engineer officer to report upon the practicability of erecting a Light-house upon the reef. In their despatch of 27th May, 1856, the Court of Directors authorised the Public Works Department to take that step and accordingly they issued instructions to Lieutenant A. Fraser

that year to survey the reef, find the soundings to some distance on every side of it, the nature of bottom, character of rock, direction and force of tides, force of the sea in the south-west monsoon and the necessary elevation of the Tower. He was directed also to ascertain during what period of each season it would be possible to proceed with the work, to submit a brief report on his return to Calcutta, to proceed to England stopping at Galle to see the operations of Mr. Poingdestre in erecting a Light-house on the Bass, to communicate with Mr. Allan Stevenson or other *Savans*, to visit the most remarkable Light-houses in positions analogous to that of the Alguada, and then to prepare his designs, and return to India with a staff.

Accordingly on the 12th December, 1856, Lieutenant Fraser arrived at Rangoon, and his Report details his movements and plans. After surveying the position and general features of Negrais and Diamond Islands, and the shores in the vicinity of Pagoda Point and Porian Point at the mouth of the Bassein River, he landed on the Alguada Reef. Its position "is six miles 540 yards distant from Pagoda Point, bearing 23° 30′; from Diamond Island four miles 1093 yards, bearing 54° 30′; from Porian Point eight miles nearly, bearing 78° 10′. It consists of two totally distinct ridges of rock, running parallel to each other, in direction 51° east of north; separated by a channel a quarter of a mile wide, of a depth varying from 2 to 3½ fathoms, with a small detached rock in the centre appearing above the surface at low water. The eastern ridge is about ¾ mile in length, by 150 to 200 feet wide at low water, and an average height of seven feet above low water mark, rising gradually, though with frequent breaks and changes of level, from the surface of the water at the north-east to 14 feet at the south-west end."

The rock of which the entire reef consists, is sand-stone, scored into parallel and alternate ridges, the west slope of which is very steep. The rise and fall of spring-tides is nine feet. The spring-tides ebb and flow with a velocity of from one to two knots an hour. The flood-tide runs in a direction between E. S. E. and south, whilst the direction of the ebb various between W. by N. and S. W. This corresponds with the course of the tidal wave. The depth of water is from one to four fathoms. After examination the site fixed on was a plateau on the eastern ridge, 600 feet distant from the S. W. extremity, which is a mass of solid rock, with an average height of 1·1 feet above high water spring tides, sheltered from the influence of the south-west monsoon, and well fitted as a residence for the workmen. The maximum force of the sea to which the Light-house would be exposed is 6,000 lbs. the square foot, which is the pressure on the Skerryvore

erection. There are three varieties of material that may be employed in the construction of a Light-house—iron, stone, foundation of stone and superstructure of iron. While iron is economical and gives facility of erection, its stability depends upon *strength* rather than *weight*, and may be resolved in some cases into the security of fixtures which attach it to the rock. Moreover it is not suited for a hot climate, and changes from the action of the marine acid. The stone tower alone is satisfactory and durable, and as the establishment for dressing the stone would have to be organised, nothing would be saved by employing iron for the superstructure. As to the height of the tower, "the elevation to be given to a light to render it visible to an observer's eye, 25 feet above the level of the surface of the sea, at a distance of 20 miles, would be 110 feet. Supposing then the tower to be 110 feet above high water mark, the light would be visible from the mast head of the smallest vessel 20 miles off.

"The dimensions of the four principal Light-houses on England's coasts in situations analogous to the Alguada Reef, are :—

	Height Ft.	Diam. at Base.	Diam. at Top.
Skerryvore, ...	138½	42	16
Bell Rock, ...	100	42	15
Eddystone,...	68	26	15
Carlingford, ...	111	48	not given."

A foundation of 60 feet in diameter will be therefore ample for all purposes. "The next question that occurs is the nature of the light to be placed on the tower. There are three classes into which the illumination of Light-houses are divided :—

"1*st*.—The catoptric.
"2*nd*.—The dioptric.
"3*rd*.—The catadioptric.

"The first consists of several lamps, the divergent rays from which are collected and evenly dispersed on the horizon by means of reflecting mirrors. The second where the same result is effected by the rays from a single lamp being refracted through lenses and prisms. The third in which a single lamp is also employed, and the light evenly diffused by means of a combination of both mirrors and lenses."

The dioptric or catadioptric system is recommended by its superior power and greater economy, the annual expenditure in England for a dioptric light being £140-3-8 less than for a catoptric. These advantages are counterbalanced by the complex nature of the machinery of the dioptric light. A plain fixed white light will be most suitable. The season during which work can be carried on on the reef will extend from about the middle of

November till the end of April. Accommodation for six months' supply of provisions must be provided for in the design for the building; and a pier with a moveable crane at its extremity should be erected for landing such supplies on the eastern side of the Light-house site. While the works are in progress a steamer will be required to maintain the communication between the depot on shore and the reef. A barrack must be constructed for the workmen. It is proposed to bring foremen of the works out from England, but to engage Chinese as the ordinary workmen. Diamond Island, 4¾ miles distant from the reef, is the most suitable situation for the depot. It has good anchorage and a little fresh water. To ascertain the correctness of a report that granite was to be found in the Island of Callagouk, 30 miles to the south of the entrance to the Moulmein River, that place was visited. The whole island, it was found, is composed of a coarse-grained stone, consisting of black mica, quartz and felspar. It is 210 miles distant from the reef, but the quarrymen could be easily supplied with provisions by the Government steamer in her monthly voyage to Tavoy and Mergui. At Green Island, immediately in front of Amherst, there is granite of a finer grain, but as the rock is much split into fissures, large blocks could not be obtained, and the place is not accessible in the S. W. monsoon. Chinese could be obtained from Hong-Kong to quarry the Callagouk granite; and two lighters of about 80 tons each would be required for the transport of the stone to the reef, and two smaller ones of 30 tons to ply between the depot on Diamond Island and the Light-house. Lime may be obtained sufficient for a hundred Light-houses at the village of Kyouk Thembau, 30 miles above Dalhousie on the right bank.

An Appendix follows the Report. It contains a memorandum on the velocity and direction of the tides, and an estimate of the expense of constructing and manning lighters. Chinese stone-cutters can be obtained in Hong-Kong at 10 dollars a month, stone-carriers at 6, and smiths for tempering tools, in the proportion of one for every 40 stone-cutters, at 16 dollars. A description of Horsburgh Light-house is given. The Governor General and Council agree with the recommendations in the Report, except that they doubt the special adaptation of a catoptric light to the sort of position in which the Alguada Reef light will be placed. Orders are given for the construction of two lighters.

Lieutenant Fraser visited England as directed, and returned on the 9th of April, 1858, when he drew up his Report on that visit under the following heads :—

1*st*. *The Tower*.—It must be of granite. The design of Skerryvore is recommended; the diameter of which is 42 feet, height

120, and diameter at that height 16 feet. "Above the shaft is a cylindric belt, 18 inches deep, surmounted by a cavetto 6 feet high, with 3 feet projection. The cavetto supports an abacus 3 feet deep, the upper surface of which forms the balcony. On the abacus rests the parapet, and on it the lantern. The outer surface of the shaft is formed by the revolution of an hyperbola round its asymptote as a vertical axis—the radius at the base being 21 feet, and at the top 8 feet. The contour of the cavetto is obtained from the quadrant of an ellipse revolving about the centre of the tower, with a radius of 8 feet on the level of its transverse axis." The light will be visible at a distance of 21.766 miles at 20 feet above the horizon, and at 50 feet above that level, 25.204 miles.

2nd. The Light.—The holophotal dioptric apparatus, all of glass with one central burner and the glass frame revolving round the burner, is recommended, so that the light on the Alguada Reef would be visible all round the compass.

3rd. Apparatus and Staff from England.—The requisite machinery and tools will cost £2400. A practical quarryman at £15 per month, an Engineer and Mechanic at £25 per month, and a good Builder at £20, must be sent out, under an agreement.

4th. The Light-keepers and the Stores.—A mixed establishment of Europeans and natives is recommended, at an expense of Rs. 436 per month. Government should provide all the supplies, and not allow spirits, save for medicinal purposes.

5th. The Depot.—There should be a signal tower, 15 feet high, furnished with a telescope, signal mast, and a small reflector lamp to point out the course for boats leaving the rock. The European light-keepers should be married. The whole of the buildings, vessels, keepers, &c. should be under the orders of the Master Attendant of Dalhousie.

6th. The Cost of Erection.

Nature of Building.	Total Cost of Tower.	Cost of Foundation.	Grand Total Co.'s Rs.	Cost. £
1st. Granite tower, ...	4,29,436	34,913	4,64,349	46,435
2nd. Ditto to 26′ in height with brick superstructure, ...	3,11,251	34,913	3,46,164	34,617
3rd. Ditto to 26′ in height, with iron superstructure, ...	4,92,303	34,913	5,27,216	52,722
4th. Ditto to 26′ in height, with plate iron superstructure, ...	3,76,803	34,913	4,11,716	41,172

Nature of Building.	Total Cost of Tower.	Cost of Foundation.	Grand Total Co.'s Rs.	Cost. £
5th. Ditto to 26′ in height, with sandstone superstructure, ...	3,93,860	34,913	4,28,773	42,877

7th. The Cost of Maintenance.

Item I.—Oil, ...	Rs. 1278	0 0
„ II.—Cotton wicks, cloth, &c. &c. ...	400	0 0
„ III.—Establishment European and Native,	5232	0 0
„ IV.—Reflector lamp at depot ...	70	0 0
„ V.—Cotton wicks, &c., for ditto, ...	20	0 0
„ VI.—Wear and tear of furniture, &c...	600	0 0
„ VII.—Rations for Europeans, ...	912	8 0
„ VIII.—Do. for Natives, ...	685	8 0
„ IX.—Fuel, ...	90	0 0
	9288	0 0
Contingencies at 5 per cent. ...	464	0 0
Grand Total—£975 per annum for maintenance of Light-house and depot, ...	Rs. 9752	0 0

The President of Council, in proceedings under date 2nd June, 1858, remarks that while the character of the light is so far settled that it is to be a first class dioptric or Fresnel light, the general question of a fixed or revolving light may be advantageously reconsidered in the Home Department, as there are already several lights in the Bay of Bengal, and before long others may be erected. The general suspension of Public works will also affect the execution of the Light-house, but the question should be again referred to the Court for their views on the whole subject. Captain Rennie, the Superintendent of Marine, recommends that the light on the reef be a fixed white one in preference to a revolving or flashing light, so that all risks attending the machinery requisite for lights of the latter description may be obviated.

REPORT ON INDIAN ADMINISTRATION.

1857-58.

Financial Department.—A general department of account has been formed and uniform accounts introduced into all the presidencies, and arrangements made for remodelling the central

office of Account, D. P. W. so as to serve as a model for all other offices of account in that department.

Public Works not in the Military Department and not of a very urgent nature were stopped, and on 27th July 1857 the limit of three crores was removed from the open five per cent loan and 4, 3½ and 4½ per cent. paper was accepted in part subscription. The amount of merchants' bullion received at the mint during the year, was Rs. 6,10,36,269, of which sum Rs. 4,86,577 was in gold. This is the heaviest amount yet received, and the mint was worked to its full power, turning out 13,43,81,262 pieces. Proposals for the construction of a new mint were sanctioned by the Court of Directors. Aid was afforded to the sufferers by the mutinies, and four per cent. Government securities fell in the course of the year to 35 discount.

Legislation.—The following Acts were passed during the year:—

"*Act VIII. of* 1857 *(an Act to amend Act XIX. of* 1847 [*The Articles of War for the Native Army.*])

"*Act IX. of* 1857 (*an Act to repeal Act VI. of* 1856 [*concerning exclusive privileges to iventors).*]

"*Act X. of* 1857 *(an Act to amend Act XXXVII. of* 1855 [*which removed certain Districts inhabited by Sonthals, &c. from the operation of the General Laws*]*).*

"*Act XI. of* 1857 *(an Act for the prevention, trial, and punishment of offences against the State).*

"*Act XII. of* 1857 *(an Act to authorize the arrest and detention, within the Ports of the Settlement of Prince of Wales' Island, Singapore, and Malacca, of Junks or native vessels suspected to be piratical).*

"*Act XIII. of* 1857 *(an Act to consolidate and amend the law relating to the cultivation of the Poppy, and the manufacture of Opium in the Presidency of Fort William in Bengal).*

"*Act XIV. of* 1857 *(an Act to make further provision for the trial and punishment of certain offences relating to the Army, and of offences against the State).*

"*Act XV. of* 1857 (*an Act to regulate the establishment of Printing Presses, and to restrain in certain cases the circulation of printed books and papers.)*

"*Act XVI. of* 1857 *(an Act to make temporary provision for the trial and punishment of heinous offences in certain Districts.)*

"*Act XVII. of* 1857 *(an Act to provide temporarily for the apprehension and trial of Native Officers and Soldiers for Mutiny and Desertion.)*

"*Act XVIII. of* 1857 *(an Act relating to the issuing of writs or processes against certain Members of the Family, Household, and Retinue of his late Highness the Nabob of the Carnatic).*

"*Act XIX. of* 1857 *(an Act for the incorporation and regulation*

of Joint Stock Companies and other Associations, either with or without limited liability of the Members thereof).

"*Act XX. of* 1857 *(an Act to amend Act IX. of* 1850 *[constituting Small Cause Courts at Calcutta, Madras and Bombay]).*

"*Act XXI. of* 1857 *(an Act to make better provision for the order and good Government of the Suburbs of Calcutta and of the Station of Howrah).*

"*Act XXII. of* 1857 *(an Act to establish and incorporate an University at Bombay).*

"*Act XXIII. of* 1857 *(an Act to provide for the good order and discipline of certain Volunteer Corps, and to invest them with certain powers).*

"*Act XXIV. of* 1857 *(an Act to authorize the levy of Port-dues and Fees at the present rates for a further period of six months).*

"*Act XXV. of* 1857 *(an Act to render Officers and Soldiers in the Native Army liable to forfeiture of property for Mutiny, and to provide for the adjudication and recovery of forfeitures of property in certain cases).*

"*Act XXVI. of* 1857 *(an Act for regulating Ferries in the Settlement of Prince of Wales' Island, Singapore, and Malacca).*

"*Act XXVII. of* 1857 *(an Act to establish and incorporate an University at Madras).*

"*Act XXVIII. of* 1857 *(an Act relating to the importation, manufacture, and sale of arms and ammunition, and for regulating the right to keep or use the same).*

"*Act XXIX. of* 1857 *(an Act to make better provision for the collection of Land Customs on certain Foreign Frontiers of the Presidency of Bombay).*

"*Act XXX. of* 1857 *(an Act for the levy of Port-dues and Fees in the Port of Calcutta).*

"*Act XXXI. of* 1857 *(an Act for the levy of Port-dues and Fees in the Port of Bombay).*

"*Act XXXII. of* 1857 *(an Act to amend the Articles of War for the Native Army).*

"*Act XXXIII. of* 1857 *(an Act to make further provision relating to Foreigners).*

"*Act XXXIV. of* 1857 *(an Act relating to the sale of Ganja in the Presidency of Bombay).*

"*Act XXXV. of* 1857 (*an Act for the levy of Port-dues in the Ports of Moulmein, Rangoon, Kyouk Phyoo, Akyab, and Chittagong*).

"*Act I. of* 1858 (*an Act to make lawful compulsory labor for the prevention of mischief by inundation, and to provide for the enforcement of customary labor on certain works of irrigation in the Presidency of Fort St. George*).

"*Act II. of* 1858 (*an Act for the levy of Port-dues in certain Ports in the Province of Cuttack*).

"*Act III. of* 1858 (*an Act to amend the law relating to the arrest and detention of State Prisoners*).

"*Act IV. of* 1858 (*an Act for providing for the exercise of certain powers by the Governor General during his absence from the Council of India*).

"*Act V. of* 1858 (*an Act for the punishment of certain offenders who have escaped from Jail, and of persons who shall knowingly harbour such offenders*).

"*Act VI. of* 1858 (*an Act to authorize the impressment of artisans and laborers for the erection of Buildings for the European Troops in India, and for works urgently required for Military purposes*).

"*Act VII. of* 1858 (*an Act for the levy of Port-dues and Fees at Ports within the Presidency of Fort St. George*).

"*Act VIII. of* 1858 (*an Act for the levy of Port-dues and Fees in the Port of Kurrachee*).

"*Act IX. of* 1858 (*an Act for the levy of Port-dues in certain Ports within the limits of the Gulf of Cambay*).

"*Act X. of* 1858 (*an Act to authorize the confiscation of villages, the imposition of fines, and the forfeiture of certain offices in cases of rebellion and other crimes committed by Inhabitants of villages or by members of tribes; and also to provide for the punishment of proprietors of land who neglect to assist in the suppression of rebellion or in the apprehension of rebels, mutineers, or deserters*).

"*Act XI. of* 1858 (*an Act to authorize the infliction of corporal punishment in certain cases*).

"*Act XII. of* 1858 (*an Act for raising funds for making and repairing roads in the Suburbs of Calcutta and the Station of Howrah*).

"*Act XIII. of* 1858 (*an Act for the punishment of persons who untawfully possess or conceal arms or other property belonging to Her Majesty or to the East India Company*).

"*Act XIV. of* 1858 (*an Act to extend the provisions of Act XXI. of* 1855 *in the Presidency of Fort Saint George, to Minors not subject to the superintendence of the Court of Wards*).

"*Act XV. of* 1858 (*an Act for the levy of Port-dues in the Port of Aden*).

"*Act XVI. of* 1858 (*an Act to extend Act XXV. of* 1855).

"*Act XVII. of* 1858 (*an Act to repeal the laws relating to the levy of Light-dues at Ports within the limits of the Gulf of Cambay*).

"*Act XVIII. of* 1858 (*an Act for the regulation of certain Ports within the Presidency of Fort St. George*)."

REPORT ON THE ADMINISTRATION OF THE PUNJAB.

1857-58.

Civil Justice.—Despite the mutinies the people persisted in litigation, and though the Courts, in consequence of the mass of other business pressing on the officers, were closed for five months, the amount of work performed was still very large. 16,132 suits were instituted in Cis-Sutlej States, of which 14,931 were decided. From the whole territory during the four troubled months the following were the suits decided :—

	June.	*July.*	*August.*	*September.*
"1856,.....	6,206 "	7,899	6,153	4,056
1857,.....	2,977	3,751	3,519	2,708 "

Punjab.—There were 493 appeals. The following is the classification of suits :—

	1856.	1857.
"Inheritance,...	872	1,974
Mortgage, &c.	834	1,161
Marriage, betrothal, &c.	1,803	1,150
Debts, ...	31,687	62,409
Miscellaneous, ...	16,555	14,418
Total, ...	51,751	81,112 "

Measures are being taken to reduce the number of suits for debt, in which the bankers who can forge books have an unfair advantage.

Criminal Justice.—The year 1856 was a good average year, but in May, 1857, a season of violent crime set in in the Cis-Sutlej States. The local officers were invested with summary powers, but the plundering "tribes immediately resumed the predatory habits of their forefathers. It might have been thought that half a century of civil rule would have effected something towards eradicating such tendencies. But no; the dormant instinct of plunder revived in an instant. Few living Goojurs had seen the days of plunder spoken of in the traditions of the tribe; but now every Goojur plundered as if he had been used to it all his life. Then began robberies in broad day-light, in every thoroughfare, almost in every village. One village would turn out *en masse* to fight another. Many boundary disputes and social quarrels, which had been decided fifty years before, were now renewed."

The Police stood their ground, but many crimes escaped punishment. The officers did however punish 5362 persons, of whom

one-fourth at least were guilty of heinous crimes. The disorder however never spread beyond the Sutlej, and the averages of crime beyond that river were almost unaffected. The following return shews the proceedings of the district officers appointed Special Commissioners to maintain order:—

	By Military Tribunals.	By Civil Authorities.	Total.
Sentenced to Death—			
Hanged, ...	86	300	386
Shot, ...	628	1,370	1,998
Sentenced to Imprisonment,	245	1,226	1,471
Flogged, ...	0	1,501	1,501
Fined, ...	0	272	272
Total number punished, ...	959	4,669	5,628

Police.—The Police under the last report numbered:—

	Police.	
Military, ...	12,853	53,226
Civil, ...	9,123	
City, ...	1,250	
Rural, ...	30,000	

Throughout the mutinies the Civil Police as a rule behaved well, those of Dhera Ghazee Khan and Googaira being the only marked exceptions. The force was gradually increased by 51 per cent. but reduced on the restoration of order, till in May, 1858, there were only 496 additional men. Great care was taken to guard the ferries, arrest suspicious characters, and generally to prevent mutineers from crossing into Hindoostan. All treasure was concentrated in places where it could be protected by European guards, and the only losses were at Kussowlee and Sealkote, and altogether did not exceed a lakh. A censorship was placed over the native Press, and is still maintained. All letters to sepoys were opened, and "the number of seditious letters thus discovered was alarmingly great. The treason was generally couched in figurative and enigmatical phrases. A strange interest attached to those revelations, as showing what the natives really said of us among themselves at that juncture. It was abundantly manifest, that the sepoys and others really did believe that we intended to destroy their caste by various devices, of which the impure cartridge was one; that the embers of Mahomedan fanaticism had again begun to glow, and that we were observed to be but a mere handful of whites amidst a vast population of Asiatics. These things, often before imagined, in regard to natives, were now veritably seen under their own

hand, in letters never intended for European eye." The Hindoostanees in the service were weeded out, and large numbers of the unemployed sent down the country in caravans. The Punjab Proper had been previously disarmed, and on the breaking out of the mutiny the measure was extended to the Cis-Sutlej States. The Hindoostanees of the cantonments were also disarmed, the use of iron-bound clubs prohibited, and the sale of sulphur and saltpetre restricted. The value of all property plundered was exacted from the plunderers, and in the Googaira district the sums thus restored amounted to £55,000. The Police stations and treasuries were already fortified, and it was proposed to discontinue arming the Police with the musket. The people throughout the mutinies assisted the Police. "It is understood that any Punjabee, who shall give up a refugee sepoy, shall receive 50 Rupees reward, and *shall be entitled to any property that may be found on the person of the prisoner.* The effect of this rule is such, that, as soon as the beaten mutineer emerges from the cantonment into the country, he finds himself among a nation of enemies. In the hilly district of Noorpoor, on the banks of the Ravee and the Jhelum, in the fastnesses of Huzara, in the valley of Peshawur, on the sandy plains of Leia, the country people have mustered with their *posse comitatus*, and joined the hue and cry against mutineers. In the Cis-Sutlej States, however, the people of all classes evinced a great disinclination to seize and deliver up mutineers and rebels; but this proceeded probably from prejudices of caste, rather than from disaffection. There has been no popular rising, except an insurrection in the jungles of Googaira, and an attempt at disturbance in a portion of the Murree Hills. In the Thaneysur district, adjoining the Delhi territory, there was much petty disturbance no doubt, but still no actual insurrection. On the other hand, it is to be remembered that, in the Cis-Sutlej States, a stream of convoys was running for months along 200 miles of the Grand Trunk Road, with unavoidably insufficient escort, and that not a waggon was plundered, nor a beast of burden stolen, nor a Rupee of treasure lost! In the Jhelum district the villagers themselves furnished escort to convey treasure to head-quarters."

Jails.—In 1856 the total number of prisoners was 12,469, who cost Rs. 35 a year a head, and died at the rate of ten per cent., against five per cent. in the previous year. There was not an emeute during the year, and only five successful escapes. In 1857 it was found necessary to remove the Hindoostanees, and entrust the jails to wild hill-men. The work was done, and out of 12,000 prisoners only 12 escapes occurred. Three jails are excepted from this statement. "At Loodhiana the Jullunder mutineers, passing through the place, broke open the jail on the 9th June,

and released 297 prisoners, of whom 174 were re-captured within the year. At Sealkote the mutineers, on the 9th July, broke open the Jail (partly with the connivance of the Police Guard,) the only instance of such misbehaviour, and released 366 prisoners, of whom 153 were re-captured. At Googaira, on the 26th July, the prisoners, with the treacherous aid of *one* of the guards, very nearly broke from jail *en masse;* but the guards were firm, 17 were shot in the fray, 33 wounded, and 18 only escaped in the darkness of the night."

The cost of the prisoners was reduced to Rs. 31 a year; Rs 27,857 were obtained from manufactured articles, and 80,000 Enfield cartridges were made by convict mutineers, thousands of sandbags for the siege of Dèlhi, and tents for Europeans. The mortality was reduced to 1 per cent., and 1126 prisoners were released either for good behaviour or on fine.

Land Tax.—In 1851-52 the price of provisions fell at once fifty per cent. The landholders were clamorous, and the Government commenced a policy of reduction which it continued for five years. "In the last Report it was shown how, at different times, 23½ lakhs of Rupees, or £235,000, had been abated from the land tax; still further abatement was, however, made during the period under report, for the demand which, in 1856-57, stood at Rupees 1,48,46,122, or £1,484,612, fell in 1857-58 to Rupees 1,46,51,066, or £1,465,106. But, owing to fresh lands coming under assessment, (owing to lapses and resumptions,) the collections scarcely varied in the aggregate, as will be thus seen:—Land Tax collected, 1856-57, Rupees 1,45,18,915, or £1,451,891; 1857-58, Rupees 1,45,16,032, or £1,451,603. It is evident then, that, throughout the year of trouble, the land tax was realized as usual."

The people indeed showed unusual readiness to pay even before the ordinary time, and in a district like Peshawur only two villages, instigated by agitators from beyond the border, shewed symptoms of recusancy. The chief reason for this doubtless was the willingness to pay the land tax to the existing authority always observed in India, but there was also no grievance inducing the people to hope for change. There was also unusual prosperity, the harvest having been large, while the markets drained by the bad season 1856 did not fall greatly. Moreover whereas formerly Punjab money was spent on Hindoostanee sepoys, in 1857 Hindoostanee money was spent on Punjabee sepoys, and with prize and plunder rendered life easier. "The regular settlement and assessment of the land tax has been progressing during the last two years, in the western and southern parts of the Punjab. The eastern and central portions have been already settled in the Report. Within these two years then, in the south,

the settlement in the Googaira district has been nearly completed, and in Mooltan far advanced; and in the Jhung district completed altogether. In the Khangurh district, near the confluence of the Indus and Chenab, a summary settlement has been made, which will answer most of the purposes of a regular one. To the west the work has been far advanced in Jhelum; nearly completed in Shahpoor; and proceeded with in Rawul Pindee. There is only one district in the Punjab (Leia) now remaining to be brought under settlement: and some ten or eleven lakhs of revenue to be regularly assessed. This is exclusive of the Trans-Indus Territory and Huzara, which it is not proposed to have regularly settled at all. In the two years this department has assessed about thirteen lakhs of revenue, measured, field by field, some 4,284,000 acres, and disposed of a vast amount of business connected with tenures and rights in land." Petty suits in the Revenue Department decreased from 19,973 in 1856-57 to 16,764 in 1857-58, the landholders being too intent on political events to bring suits against each other. Sales of land are to be confined within the narrowest limits, as frequent transfers usually indicate distress over taxation or some sinister influence at work. It is to be noticed that during 1857 advances for new wells and such works were less frequently applied for.

Customs.—There are no customs in the Punjab. The excise on opium, drugs and liquors fell a little short in 1856-57. "The amount in 1856-57 stood at Rupees 5,99,393, or £59,939; and in 1857-58 at Rupees 5,04,498, or £50,450."

Salt.—The salt revenue during 1856-57 declined, but in 1857-58 reached its ordinary average, and the receipts reached Rupees 20,75,000. No advantage was taken of the crisis to smuggle.

Stamps.—The stamp revenue increased in 1856-57, owing to an order decreasing the time allowed for the institution of suits from twelve years to six. The general statement of revenue is as follows:—

	Land Tax.	Spirits, Drugs and Opium.	Salt.	Miscellaneous, including Stamps.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.
1856-57, ...	1,48,46,122	5,99,393	20.08,393	18,61,664	1,93.15.572
	£ 1,484,612	£ 59,939	£ 200,839	£ 186,167	£ 1,931,557
	Rs.	Rs.	Rs.	Rs.	Rs.
1857-58, ...	1,45,16,032	5,04,498	20.75,278	20,87,306	1.91,83.114
	£ 1,451,603	£ 50,450	£ 207,528	£ 208,730	£ 1,918,311
	Rs.	Rs.	Rs.	Rs.	Rs.
Difference,	3,30,090	94,895	66,885	2,25.642	1,32,458
	£ 33,009	£ 9,489	£ 6,688	£ 22,564	£ 13,246

Education.—In 1856-57 the machinery of this department was organized. "A Director was appointed on a salary of Rupees 1,200 per mensem; two Inspectors on Rupees 600 each for the Eastern and Western Circles respectively; 11 Deputy Inspectors, each to receive a salary from Rupees 80 to 150 per mensem, and to supervise two or more districts; and 17 Sub-Deputy Inspectors, on salaries of Rupees 20 to 60." Each district is divided into three or four Tehseels, and in each Tehseel a Government school was established; 107 schools were thus founded. A cess of one per cent. from the landowners was paid without murmur, yielding 1,38,000 Rupees a year, and 456 village schools established from this resource. Grants-in-aid to the amount of Rs. 6,970 were accepted by various Mission schools, and a Normal school was established. During the mutiny the farther establishment of schools ceased, but there was no diminution in the attendance even in the Cis-Sutlej States, and at Rawul Pindee alone was there any symptom of religious bigotry. By November the crisis was past, and by January 700 new schools had been founded. The expenditure for two years has been:—

1856-57, ...	1,28,864
1857-58, ...	2,27,131

There is a balance of some Rs. 1,80,000 at credit of the School Cess Fund, and the educational income amounts altogether to three lakhs, half of which is contributed by Government. The number of schools was in May, 1858, 4,923, and of scholars 46,008. The

education consists in the Government schools of the rudiments of history, geography, arithmetic, and grammar. The Oordoo language is used and the Persian character. The pupils are more than half Hindoo, and Sikh pupils are not numerous. There are eleven female schools all Mussulman. The Normal school at Lahore contains 40 pupils, and another has been opened at Rawul Pindee. During the year 14,139 little books were sold. The Director General deserves every credit.

Public Works.—Military works and the Baree Dooab canal alone were carried forward, but great progress has been made with the accounts which were greatly in arrear.

Roads.—The great road from Delhi to the Sutlej is now complete except the bridging of the five rivers near Umballa, which, if bridged at all, must be bridged by wooden structures. "During the past two years about 11½ lakhs of Rupees, or £115,000, have been expended on roads, which, with the previous expenditure shown in the last Report, will make an aggregate of 123¾ lakhs, or £1,237,500. But despite all that has been done and spent, the work remaining to be effected, before the Punjab roads are in a proper state, is enormous. *Thousands* of expensive bridges, and many hundred miles of metalled roadway, have yet to be constructed. At present most of our roads are in a crude, half-finished state."

Railways.—The Sindh Railway Company have obtained a guarantee for the line from Umritsur to Mooltan.

Canals.—The works on the Baree Dooab canal, suspended during the mutinies, were resumed in the last quarter of 1857-58. It is hoped that it may be finished to the tail of the Lahore branch (133 miles) by 1859. This will open the entire Manjha country, the home of the Sikhs. The entire cost of the canal will be 135 lakhs, of which 7,73,500 have been expended.

Military and Miscellaneous.—"During 1856-57 the buildings at Peshawur, Nowshera, and Rawul Pindee, were well nigh completed. At Kussowlee, in the hills near Umballa, some barracks of a novel and interesting design were advanced. During 1857-58, the military works executed had chiefly reference to the existing crisis. Temporary barracks for European troops were erected at Campbellpoor, near Attock on the Indus, at Attock itself, at Umritsur, and at Mooltan. The infantry barracks at Umballa were added to. The fortified arsenal at Ferozepoor was proceeded with, and works were added to the forts of Attock, Umritsur, and Philore. The expenditure on Military works in 1856-57 amounted to Rupees 20,75,000, and in 1857-58 to Rupees 11,40,000, in all Rupees 32,15,000 for the two years, or £321,500."

The total expenditure on public works has been :—

	1856-57.	1857-58.	Previous Expenditure.	TOTAL.
Roads, ...	6,01,408	5,51,619	1,12,24,600	1,23,77,627
Canals, ...	17,18,413	12,70,000	71,53,000	1,01,41,413
Miscellaneous,...	1,74,329	71,471	26,55,000	29,00,800
Military, ...	20,75,261	11,40,976	1,14,21,000	1,46,37,237
Total, Rupees	45,69,411	30,34,066	3,24,53,600	4,00,57,077
£	456,941	303,406	3,245,360	4,005,707

Post Office.—During the crisis of 1857 the postal communication between the Punjab and Delhi was maintained uninterrupted, and the post in the Punjab was only cut off once *viz.* in the Googaira rising. Communication decreased however from 3,43,641 covers sent in 1856-57 to 2,66,422 in 1857-58.

The Telegraph was invaluable, and during the mutinies was only twice cut. A new line from Kurrachee to Lahore is being erected. The cost of working the Punjab lines in 1857-58 was Rs. 48,070.

Marine.—There was an increase in the traffic on the rivers during 1857-58 :—

	Boats.	Maunds.	Tons.
"1855-56, (last Report,)	2,771	8,53,444	= 30,480
1856-57, (present Report,) ...	3,340	10,71,904	= 38,282
1857-58, (ditto,) ...	3,548	11,79,495	= 42,125"

A private Company intend by January, 1859, to run steamers from Kurrachee to Mooltan. "It was explained in the last Report, that the steamers of the Indus Flotilla, which ply from Kurrachee to Mooltan, are not well adapted to existing circumstances. But, during 1857, they were indeed *essential to the existence of British rule in the Punjab.* When our intercourse with the rest of India was cut off, they were our sole means of communication with the sea-board. They brought up our reinforcements of troops, our military stores, and our treasure. They conveyed the greater part of three regiments of European infantry and one of cavalry; some fifty lakhs of treasure (half a million sterling), and a vast quantity of baggage and ammunition."

Finance.—The following table shews the general result of the two years :—

		1855-56.	1856-57.	1857-58.
Income, ...	Rs.	2,01,26,935	2,03,77,789	2,05,30,710
	£	2,012,693	2,037,779	2,053,071
Expenditure, ...	Rs.	1,63,29,739	1,65,00,072	1,76,66,757
	£	1,632,974	1,650,007	1,766,676
Surplus, ...	Rs.	37,97,196	38,77,717	28,63,953
	£	379,719	387,772	286,395

In 1857 judicial charges were raised 8 per cent. by new Police, and reduced as much in Public works. Military charges increased from 50 lakhs to 77 lakhs. "In addition to the Punjab Irregular Force and Military Police shown in former Reports, numerous levies, horse and foot, were raised to preserve the peace; and many new battalions were embodied to supply the place of the mutinied sepoys, and to enable the Punjab Government to reinforce the army before Delhi."

In July, 1857-58 it became evident that there would be a serious want of funds. The new levies and the army before Delhi had to be maintained, the latter receiving 20 lakhs of Rupees. The bill transactions, which usually brought a million a year into the Punjab territories, would yield next to nothing. It was resolved therefore to keep all civil establishments, European officers, and disarmed troops in arrears for three months, and raise a loan of one million at 6 per cent. repayable in a year. The Maharajah of Cashmere, of Puttiala, and other Chiefs, subscribed liberally, but the mercantile class were tardy and niggardly. 41 lakhs were thus raised, and are now being paid off to those who desire their money. In autumn 50 lakhs of cash were received in Bombay, and by Spring 1858 bills began again to be drawn, and by the close of the year all arrears except the pay of the disarmed sepoys were discharged.

"In round numbers, the financial operations of that remarkable year may be thus exhibited:—

The Income consisted of—	*Lakhs.*
Cash Balance in hand in May, 1857, ...	70
Revenues of Punjab Territories, ...	200
Raised by Loan, ...	41
Collected from the Delhi Territory, ...	55
Received from Supply Bills,...	20
Rem ttances from Bombay, ...	50
Total, about lakhs, ...	436
Or nearly £4⅓ millions sterling.	

The Expenditure consisted of—	*Lakhs.*
Punjab Civil and Political Charges, ...	122
Military Expenditure, ...	170
Despatched to Delhi during the Siege, ...	20
Delhi Administration, ...	12
Cash Balance at close of year, ...	112
Total, about lakhs, ...	436"
Or £ 4⅓ millions sterling.	

A portion of the cash balance at the close of the year belongs to the Delhi Prize Agency. The Delhi revenue will add 80 lakhs a year to the finances of the Punjab, and if the bill transactions again reach their former figure, the cash receipts of the territory between the Jumna and the Indus will reach 3¾ millions of pounds, or more than the expenditure under all heads military excluded. The unadjusted accounts at the close of 1857-58 amounted to 33 lakhs.

Ecclesiastical.—Seventeen churches have been constructed or are under construction in the Punjab.

Political.—In January, 1857, the Government of India agreed to assist Dost Mahommed against the Persians by a grant of £10,000 a month, and to send three Commissioners to Candahar to observe the course of events. The Persians evacuated Herat in July, 1857, and a Prince of Dost Mahommed's family now reigns there. The Dost remained faithful to the British throughout the mutinies, restraining the fanatical classes. "It will now be seen that, through the crisis of 1857, there may be recognized, in the state of the frontier, the favoring hand of Providence. In Huzara the Chiefs invariably behaved well. On the Peshawur border civil war broke out in Swat (the point whence danger was most to be apprehended) *on the same day* on which the Delhi outbreak occurred! Some of our worst enemies were thus providentially paralyzed. The fugitive mutineers of the 55th N. I. were expelled from Swat, to perish miserably in their wanderings among the mountains. One tribe of Afreedees, then under blockade for previous offences, came into Peshawur, and enlisted in our service. The murderers of Lieutenant Hand paid the fine demanded for his blood. A fanatic Syud, who came to preach war against the infidels, was driven away by the men of the Khyber Pass. The fanatic then went to our old enemies, the Mohmunds, but they were pacified by Colonel Edwardes. The Punjtar Chief tried to disturb the Eusufzye Frontier, as might have been expected, but that attempt was put down by force. In the Kohat district, the famous Kohat Pass, so often closed before, remained open uninterruptedly throughout the crisis! The Meeranzye people, awed by the late expedition, paid their revenue better than they had ever done before. The Cabul Kheyl Wuzeerees, smarting from recent chastisement, now for the first time behaved well. In the Bunnoo district, the Muhsood Wuzeerees, who had recently begun to conduct themselves respectably, now continued to do so. The people of the neighbouring Independent Valley of Dour were torn by factions, but, fortunately, the strife was composed during this very season. In the Lower Derajat the peace was only once seriously disturbed. On that

occasion, the Murrees (subjects of Khelat) committed a desperate raid. The assailants were about 500 strong, and all of them mounted: they carried off about Rupees 10,000 (£1,000) worth of cattle, killed thirty-eight men, and wounded four. With this exception, however, the raids were, during the critical period, remarkably few all along the Derajat Frontier—fewer indeed than during the corresponding period of previous years." In April, 1858, a powerful expedition punished the Punjtar Chief, and destroyed the villages of the Sitana fanatics.

The Chiefs east of the Sutlej behaved well. The Rajah of Jheend at once declared for the British, and with 800 men cleared the road from Kurnal to Delhi. The Maha Rajah of Puttiala supplied 5000 men, and kept open the communication between the army before Delhi and the Punjab. The contingent of Nabha, 800 strong, occupied Loodhiana and escorted the siege train from Phillour. The petty Sikh Chiefs, 80 in number, at once sent their contingents. The Rajah of Kupoorthulla furnished 2000 men in the Jullundur Dooab. The Rajah of Busahir and the Nawab of Bhawulpoor alone remained lukewarm. The Maha Rajah of Cashmere furnished 2000 men and his son Rumbeer Singh, who succeeded Golab Singh just as the mutiny broke out, maintained his fidelity.

Military.—When the mutinies broke out there were 36,000 native troops of all arms in the Punjab, 11 regiments of European infantry, one of cavalry, and 2000 European artillery, giving a total of 10,500 men. Three of these regiments were in the Simla Hills, and three in Peshawur; Lahore was held by Europeans, Govindghur and Mooltan by a Company of European Artillery each, Phillour, Attock, Kangra, and Noorpoor by natives. The arsenal of Ferozepore was held by Europeans, Phillour by natives. There were 11,000 Irregular Punjabees along the frontier, and 9,000 Military Police. On the outbreak 3 European Infantry Regiments and 1 European Cavalry were sent to Delhi, leaving 7,500 Europeans to 33,000 Hindoostanees. The Hindoostanees, it was seen, were ready to mutiny. "On the 14th of May the greater portion of the 45th and 57th N. I. mutinied at Ferozepoor. An attempt was made to seize the great arsenal. Most of the mutineers escaped. On the 21st of the same month, at Murdan, near Peshawur, the 55th N. I. mutinied on seeing an European force approach to take their arms, and fled, hotly pursued, to the hills: these were nearly all destroyed. On the 7th and 8th of June, the 6th Light Cavalry, the 36th, 61st and 3rd N. I. mutinied in the Jullundur Doab, and escaped to Delhi. At Jhelum, on the 7th July, the bulk of the 14th N. I. broke out on seeing European infantry approach their lines: these were nearly all destroyed or

captured. At Sealkote, on the 9th July, a wing of the 9th Light Cavalry and 46th N. I. mutinied, and committed some murders: they were intercepted, and nearly all destroyed.— On the 30th July, the disarmed 26th N. I. fled from Lahore, having murdered their Commanding Officer. They also were intercepted and destroyed. At Ferozepoor, on August 19th, the 10th Light Cavalry mutinied and escaped. At Peshawur, on the 28th August, the 51st N. I., though disarmed, mutinied desperately: they were all destroyed."

The mutineers escaped in only three instances out of eight. "The 8th Light Cavalry, the 16th, 26th, and 49th N. I. were disarmed at Lahore, on the 13th May; the 5th Light Cavalry, the 51st, 24th, and 27th N. I., at Peshawur, on the 22nd May; the 10th Irregular Cavalry, at Nowshera, on the 26th of the same month; the 62nd and 69th N. I., at Mooltan, on the 10th June; the 5th N. I., at Umballa, on the 15th June; the 33rd and 35th N. I., in the Jullundur Doab, on the 25th June; the 58th, and part of the 14th N. I., at Rawul Pindee, on the 7th July; 259 of the 4th Light Cavalry, at Umballa, on the 15th July; the 59th N. I., at Umritsur, on the 8th July; the 4th N. I., at Hooshyarpoor and Noorpoor, on the 12th July; the 39th N. I., in the Derajat, on the 14th July. The native gunners of four troops or batteries of artillery were removed from their guns, and their place supplied by volunteers from European infantry. Besides the above, there are the Khelat-i-Ghilzie Regiment, and the 21st Regiment of N. I., and seven corps of Irregular Cavalry still armed and doing duty. In all, these men may number upwards of 5,000. They have, of course, remained submissive to duty, and some of them have behaved well. Among them, the 1st Irregular Cavalry distinguished itself in the disarming at Mooltan. The Khelat-i-Ghilzie Regiment in the Peshawur Valley remained faithful, and thereby rendered important service. The 21st N. I. also remained firm. A portion of the 21st N. I. took part in a recent expedition on the Peshawur frontier. One troop (Major Smyth's) of Horse Artillery, at Hooshyarpoor, gave intelligence of the designs of the mutineers, and was then ordered to Delhi, where it behaved in an exemplary manner."

The forts were immediately placed in European hands, and "the first body of troops detached from the Punjab territories was that which accompanied the late General Anson, namely, the 1st and 2nd European Bengal Fusiliers and H. M.'s 75th Foot. These were speedily followed by a siege train from Philore. Then a wing of H. M.'s 8th Foot, a wing of H. M.'s 61st Foot, the well-known Guide Corps, the 4th Sikhs, the 1st Punjab Infantry, the 1st Punjab Cavalry, and parts of the 2nd

and 5th Punjab Cavalry, were despatched to Delhi. Some 300 artillery-men of the old Sikh army were enlisted for our service. A Sapper and Miner Corps of low-caste Sikhs, 1,200 strong, and a body of Punjab horsemen, were raised and sent to the same destination. It was arranged that the contingents of the Maha Rajah of Puttiala, the Rajahs of Jheend and Nabha, in all 7,000 men, should co-operate, which they did most satisfactorily. An Irregular Force of about 1,000 men, under General Van Cortlandt, was ordered to clear the western part of the Delhi territory."

Waggon trains were organized from Mooltan to Delhi, and "in August, one last effort had to be made to send reinforcements. At that time British power, ever in the Punjab, rested on a slender basis. There were fierce tribes watching like wild beasts for a chance to spring upon us. There was a large population, faithful indeed as yet, but observing events with strained attention, and speculating whether we should or should not be able to hold our own. There were 6,000 armed Hindoostanee troops. There were 12,000 disarmed sepoys. There were but seven weak Regiments of European Infantry, and less than 1,000 European Artillery—in all about 6,200 men. But of these nearly half were locked up in the Peshawur Valley, and considerably prostrated by fever. The remainder were occupied chiefly in guarding the disarmed sepoys. The only European troops not thus engaged were the remainder of H. M.'s 8th and 61st at Jullundur and Ferozepoor, and H. M.'s 52nd in the moveable column at Umritsur. If these should go, there would then be no European reserve whatever in the Punjab, and every station would be reduced to the very minimum of efficient strength. But still such was the paramount necessity of reinforcing Delhi, that even the last available Europeans were all sent under Brigadier General Nicholson. At the same time there were despatched the 2nd, 4th, and 7th Regiments of Punjab Infantry. These were followed by a first-class siege train from Ferozepoor, by a wing of the 1st Belooch Battalion arrived from Sindh, and a contingent, 2,000 strong, from the Maha Rajah of Jummoo. There then remained some 4,500 Europeans (sick included) to hold the Punjab."

Had not Delhi fallen at once there would have been a struggle for European existence in the Punjab. There was an insurrection among the Mussulman tribes of the Googaira, but it was put down in some twenty days. At the time of the outbreak there were eighteen Punjabee Regiments. "Immediately afterwards four companies were added to each of these to form the nucleus of new battalions. These fresh corps were rapidly formed, five in May and June, eight in August, two in October, and

three in subsequent months: in all eighteen. Levies were also raised in all the districts to do the military duties of the province, numbering eventually 7,000 horse and about 9,000 foot." making on 1st May, 58,815 men of the Punjab, Hill-men, Mussulmans, and about one-third true Sikhs. Some thousands moreover were enlisted in the Police corps of Hindostan, but recruiting in the Punjab has now stopped. The fidelity of these men was fully proved.

At Anarkullee a body of 100 Light Horse was formed from clerks and other Europeans, and at Lahore another corps was collected 160 strong from the Eurasian bandmen of the disarmed Regiments.

Surveys.—"The interesting Survey of Cashmere, mentioned in the last Report, has been proceeded with during the last two years. The Topographical Survey of Lower Trans-Indus Frontier has been well advanced. The Revenue Surveys have progressed in the Mooltan district and in the Sind Sagur (Cis-Indus) Doab. Some 16,378 square miles have been surveyed during the two years; no interruption was suffered during the critical year of 1857. This important Survey is now nearly complete for all these territories."

Tea.—The sales of tea from the Government farms in the Kangra Hills amounted to 5664 lbs., sold at an average of 3*s.* per pound. The produce of the following year was made over to the Commissariat.

The Delhi Territory.—This territory has been virtually administered by the Chief Commissioner since the outbreak, and was formally added to the Punjab in February, 1858. "The territory, as it now stands, contains 13,975 square miles, 2¾ millions of population, and will pay 75 or 80 lakhs (£800,000) per annum of revenue."

In September, when the city fell, the inhabitants were traitors, the surrounding tribes plunderers, the neighbouring Chiefs rebel or lukewarm, and only the west of the territory remained in British possession. "Immediately after the re-capture of Delhi, forces, consisting of European and Punjabee troops and the Cashmere contingent, proceeded, some to occupy the Goorgaon district, and some to deal just vengeance to the rebel feudatories. The Chiefs of Jhujjur, Bullubgurh, Dadree, and Furokhnugger, were either taken, or surrendered themselves; their forts, treasure, and equipages were seized as prize for the troops; their lands were placed under attachment: but their families were treated with respect. On the 21st September, the King of Delhi, with his favorite wife and son, surrendered himself to Major Hodson. At the same time several of the Delhi Princes, who had shared in the Kings's rebellion, were slain."

The Chiefs of Jhujjur, Bullubgurh, and Furokhnugger, were tried by Military Commission and hung; the Dadree Chief lost his territories which were given to the Rajah of Jheend. A portion of the Jhujjur territory was assigned to the Maharajah of Puttiala, and the Rajah of Nabha, and the King of Delhi was tried for the murder of Europeans. The civil authorities resumed their functions in 1858, but a judicial commission was organized to try political offenders. "As regards the city itself, one European regiment is accommodated in the palace of the Moguls, and one in the Government college; the Sikh Corps in the great mosque; the European artillery in the Arabic college. The great magazine is of course held by Europeans. The treasure is within the citadel palace. The most important gates of the city are guarded by Europeans. The city walls and fosse are standing. The church is restored for divine worship. The houses of the city have not materially suffered."

The city is being gradually repeopled. The people of the whole district were also armed, and the districts fined to compensate Christian sufferers. The entire territory was divided into two Commissionerships, of Delhi and Hissar; a Military Police has been organized containing 1456 Cavalry and 2560 Infantry, the Police machinery has been repaired, and violent crime has ended. The Punjab Code has been introduced, and the revenue with confiscations will amount to 45 lakhs. The Customs line has been reorganized, and yields more than its former average. "The total revenue, including land tax, customs, excise, stamps, and miscellaneous, may be set down at 75, or perhaps 80 lakhs per annum, or three-quarters of a million sterling. The cost of civil establishments at 15 lakhs; of military police at 4 lakhs; of regular troops, European and others, at 12 lakhs; in all 31 lakhs, or £310,000. It is evident, then, that the territory will yield a large surplus."

The reporter reviews the general position of the Punjab during the mutinies, stating that had the fall of Delhi been postponed the whole Punjab would have burst out in insurrection.

ADMINISTRATION OF THE STRAITS SETTLEMENTS.

1857-58.

"The following statement exhibits the amount of revenue collected in the Straits Settlements during the year 1857, as compared with the former year:—

	1856-57.	1857-58.
"Penang, ... Co.'s Rs.	3,04,809	3,19,522
Malacca,.. ... ... „	1,79,938	1,72,599
Singapore, ... „	6,78,560	7,70,796
Total Co.'s Rs.	11,63,308	12,62,918

"The following exhibits the composition of the above Totals, and at the same time points out the main sources of the revenue of the Straits :—

	1856-57.	1857-58.
"Excise Farms, ... Co.'s Rs.	8,06,384	9,20,273
Lands, ... „	1,87,286	1,65,866
Judicial Fees and Fines, „	69,534	71,455
Miscellaneous, ... „	1,00,104	1,05,324
Total Co.'s Rs. ...	11,63,308	12,62,918"

Police.—The Police requires to be better paid, the population being continually increased from the refuse and scum of other countries. There are

Convicts in Penang, ...	1,275
Singapore, ...	2,193
Malacca, ...	556
Who cost in	
Penang, ...	77,516
Singapore, ...	1,18,244
Malacca, ...	32,191

The convicts have been orderly during the year. The value of their labour is equal to their cost. The mortality amounts to 8 per cent. per annum. The cost of the administration during the year, not including Military, was Rs. 9,39,991, shewing an excess of revenue of 3,37,426. The municipal revenue of the year was

	1856.	1857.
"Penang, ...	$ 44,002	$ 39,702
Malacca, ... „	10,175	11,248
Singapore, ... „	56,688	57,597
$ Total, ...	1,10,865	$ 1,08,547
Or, Co.'s Rs. ...	2,43,903	2,38,803"

The Police and Conservancy charges are defrayed from these sources. The following is the abstract of trade :—

	IMPORTS.				EXPORTS.			
	1856-57.	1857-58.	Increase.	Decrease.	1856-57.	1857-58.	Increase.	Decrease.
Great Britain, ...	1,46,42,097	1,84,42,095	37,99,998	... ...	53,70,658	58,75,278	5,04,620	... ...
North America, ...	3,98,904	4,88,266	89,362	... ...	27,64,048	29,22,357	1,58,309	... ...
Europe, ...	20,51,878	23,14,189	2,62,311	... ...	24,23,826	22,76,133	.....	1,47,693
Australia, ...	3,26,887	3,84,852	57,965	... ...	4,26,764	3,66,322	.....	60,442
Calcutta, ...	60,99,612	78,13,416	17,13,804	... ...	34,99,797	29,75,334	.....	5,24,463
Madras, ...	2,10,891	5,47,873	3,36,982	... ...	5,97,845	8,23,505	2,25,660	... ...
Bombay, ...	12,47,177	26,65,970	14,18,793	... ...	9,32,669	12,54,201	3,21,532	... ...
China, ...	61,97,825	87,51,676	25,53,851	... ...	1,04,37,820	1,38,49,575	34,11,755	... ...
Cochin China, ...	9,41,958	12,50,078	3,08,120	... ...	6,49,914	10,50,030	4,00,116	... ...
Siam, ...	35,12,501	29,00,703	... ...	6,11,798	35,69,732	39,93,774	4,24,042	... ...
Manila, ...	5,48,836	9,82,026	4,33,190	... ...	1,86,884	14,39,153	12,52,269	... ...
Java, Bally, &c. ...	58,80,124	66,21,695	7,41,571	... ...	51,24,057	65,44,076	14,20,019	... ...
Borneo, ...	15,65,776	20,53,241	4,87,465	... ...	13,64,503	18,10,664	4,46,161	... ...
Celebes, ...	10,80,044	16,36,464	5,56,420	... ...	14,16,181	16,06,428	1,90,247	... ...
Sumatra, ...	8,12,896	9,50,129	1,37,233	... ...	6,63,828	7,61,444	97,616	... ...
Malayaw Peninsula,	16,45,297	19,92,772	3,47,475	... ...	18,55,582	19,16,383	60,801	... ...
Miscellaneous, ...	56,82,285	72,57,494	15,75,209	... ...	64,92,873	83,71,182	18,78,309	... ...
	5,28,44,988	6,70,52,939	1,48,19,749	6,11,798	4,77,76,981	5,78,35,839	1,07,91,456	7,32,598
Co.'s Rs. ...		5,28,44,988	6,11,798			4,77,76,981	7,32,598	
	Increase, Co.'s Rs.	1,42,07,951	1,42,07,951		Increase, Co.'s Rs.	1,00,58,858	1,00,58,858	

A report is added on the jails and jail hospitals of Singapore, remonstrating against the practice of sending diseased men, or men of extreme old age, to the Straits.

ADMINISTRATION OF THE ASSIGNED DISTRICTS.

1857-58.

Judicial.—The Resident at Hyderabad, Col. Davidson, reports that no alteration has been made in the Civil jurisdiction of the different Courts and "the general results of the statistics of Civil Justice in the Assigned Districts, for the year under report, would appear to be that at the close of the year 31st December, 1856, there were pending 1499 suits; 5827 original suits were instituted during the year, and 213 appeals, making a total of 6040 suits, and including those pending from the previous year, it makes a grand total of 7539.

"Out of this number, 2804 were decided in favor of plaintiff or appellant, 867 in favor of defendant or respondent, 296 were nonsuited, 644 were dismissed in default, 1081 adjusted by compromise, and 508 were transferred, making a total of 6,201, leaving 1338 pending at the close of the year.

"The average number of days for each case was 100. The total value of property litigated was Rupees 8,17,866-4-8. The total cost of suits was Rupees 27,206-8-1. The average cost in each case was Rupees 4-6-2, and the percentage of cost to value was Rupees 3-5-2."

Criminal Justice.—It is recommended that a short Code compiled by Mr. Maltby should be applied to the districts, as it is difficult to obtain the Bengal Regulations and still more difficult to master them. There were committed during the year

Crimes of the	1st class,	...	...	...	27
„	2nd „	...	...	...	45
„	3rd „	..	...	...	45
„	4th „	...	...	...	10

only 3 persons were condemned to death and 39 to transportation. Besides these 2765 cases were decided by the Magistracy and Police involving 4196 persons. In the Raichore Doab there is too much interference in petty offences, 2000 cases for example having been heard of "abusive language." The percentage of stolen property recovered was Rs. 171-5-5 per cent. On the whole, criminal justice is in a satisfactory state in Berar.

Police.—The Police of the Assigned Districts now costs Rs. 1,78,092 a year. The Police who are managed on the North-west system, are generally inefficient, and in North Berar violent crime has increased at a frightful rate. Sixteen dacoities, several accompanied with wounding and torture, occurred in one month, and the Police failed to bring the offenders to justice. The Police in that province must be strengthened, three Thannas of Mounted Police established, and a Rural Police created, having one Jaylia to each village. In the Raichore Doab which is over-governed, the expense of the Police is Rs. 2,37,317 a year or 20 per cent. upon the revenue. Town Police ought to be established, and the expense defrayed by a tax on shopkeepers and other wealthy classes, being the only tax to which the people appear disposed to submit. A complete reorganization of the Police General, Rural, and Town, is proposed whenever sanction has been obtained from Government. A Bheel rebellion on the Candeish Frontier was put down in March, swiftly and satisfactorily.

Jails.—"A central Jail has been ordered to be constructed at Dharaseo, and materials are already being collected. District Jails will now be ordered at Oomraootee, Khamgaom, and Lingsoogoor, which have been determined by the Government of India as the Sudder Stations of the Deputy Commissioners of East and West Berar, and the Raichore Doab." The existing central Jail is an old fort at Nuldroog deemed unsuitable, being unhealthy, ill-ventilated, and ill-supplied with water. No system of classification has been attempted, and only a few articles of common manufacture have been made. The prisoners have been employed in cleaning the Fort. "The medical return shows that out of an average strength of 383 prisoners, sixty-nine died from disease, chiefly between the 1st September and the 31st December, and out of an aggregate number of 4606, 812 were admitted into hospital. Of the number who died, nine died of cholera, forty-one of a malignant fever, and the re-remainder from other causes."

The Jail costs Rs. 16,980 a year. An outbreak was attempted on 13th September, 1857, but was defeated by the guards who killed twenty. Only one escaped. The average cost of the prisoners in the minor Jails is in

North Berar,...	Rs.	29	3	7 per annum.
South do.	„	35	12	0 „
Dharaseo, ...	„	0	0	0 „
Raichore, ...	„	67	5	3 „

There are no civil Jails.

The following is the revenue account since the districts were assigned:—

Year.	Receipts.	Company's Rupees.		
1853-54, ...	Total Collections Gross Revenue, ...	37,59,682	2	11
	Value of Ordnance Stores,....	3,10,442	13	11
	In the hands of Paymasters, ...	73,000	13	0
		41,43,125	13	10
	Balance against the Nizam, ...	3,30,947	5	6
	Total Company's Rupees, ...	44,74,073	3	4
1854-55, ...	Total Collections Gross Revenue, ...	43,20,574	15	8
	Balance against the Nizam, ...	1,71,232	2	9
	Total Company's Rupees, ...	44,91,807	2	5
1855-56, ...	Total Collections Gross Revenue, ...	43,05,549	10	0
	Balance against the Nizam, ...	66,540	1	8
	Total Company's Rupees, ..	43,72,089	11	8
1856-57, ...	Total Collections Gross Revenue, ...	45,79,764	8	3
	Received on account of unclaimed stipends of Pensioners in Hindoostan,	1,889	10	7
	Balance received from the Military Secretary on account of the Nizam's Contingent, ...	894	12	6
	Total Company's Rupees, ...	45,82,548	15	4
1857-58, ...	Total Collections Gross Revenue, ...	47,48,702	7	8
	Balance in favor of the Nizam for 1856-57,...	3,76,699	5	4
	Received from the Officer of the late Paymaster, Hyderabad Contingent,	7,890	15	1
	Total Company's Rupees, ...	51,32,292	12	1

Year.	Disbursements.	Company's Rupees.		
1853-54, ...	Salaries, Establishments, and Costs of Collection, ...	3,76,591	12	5
	Payments provided for by Treaty, ...	24,85,419	14	1
	Arrears due to Contingent prior to Treaty, ...	16,12,061	8	10
	Total Company's Rupees, ...	44,74,073	3	4
1854-55, ...	Salaries, Establishments, and Costs of Collection, ...	9,18,908	12	8
	Payments provided for by Treaty, ...	32,41,951	0	3
	Balance against the Nizam for 1853-54,	3,30,947	5	6
	Total Company's Rupees, ...	44,91,807	2	5
1855-56, ...	Salaries, Establishments, and Costs of Collection, ...	11,27,245	10	1
	Payments provided for by Treaty, ..	30,73,611	14	10
	Balance against the Nizam for 1854-55,	1,71,232	2	9
	Total Company's Rupees, ...	43,72,089	11	8
1856-57, ...	Salaries, Establishments, and Costs of Collection, ...	8,87,892	7	5
	Miscellaneous advances unadjusted,	3,61,682	5	9
	Payments provided for by Treaty, ...	28,89,734	11	2
	Balance against the Nizam for 1855-56,	66,540	1	8
		42,05,849	10	0
	Balance in favor of the Nizam,...	3,76,699	5	4
	Total Company's Rupees, ...	45,82,548	15	4
1857-58, ...	Salaries, Establishments, and Costs of Collection, ...	12,59,295	10	8
	Miscellaneous advances unadjusted,...	4,75,562	11	10
	Payments provided for by Treaty, ...	29,68,787	0	2
		47,03,645	6	8
	Balance in favor of the Nizam, ..	4,28,647	5	5
	Total Company's Rupees, ...	51,32,292	12	1

No great increase, and no great falling off are expected There has been however an objectionable tendency to introduce the ryotwarree system to the supersession of the old plan which was zemindaree, potailee, and ryotwaree all mixed up together. Details summarized above are added, and a report from Mr. Bullock warning Collectors against over-assessment. A minute report on village expenses follows. It is recommended that the village allowances, and those to deshmooks and deshpandies be granted, as they have a prescriptive right to them, but that they be reduced to their just limits which they have a tendency to exceed. The Enam Commissioner was appointed on the 7th April, 1857, and up to 1st July, 1858, 125 cases have been disposed of. With regard to lands enam-holders are little annoyed by the process of enquiry, but the recipients of money grants are injured by the delay necessary for enquiry. The Commissioner recommends that all payments made at the time of the cession should be sanctioned at once. "It appears to me that in every district there ought to be at least one extra Assistant Commissioner, solely attached for the time to the Enam Commissioner, whose duty should be to collect, collate and translate the oral and documentary evidence on each claim, and in that form the papers should be transmitted to the Enam Commissioner for his final decision and report. The work would then go on simultaneously in each district, and its completion might be contemplated within a reasonable time.

"I would further beg to observe, that in my opinion the whole class of wuttundaree claims for service, whether village or pergunnah, might be disposed of under one rule, upon one clear and discriminating report, and that the individual claims of this numerous body need not undergo separate investigation.

"The Enam Commissioner seems disposed to admit the claims of co-sharers to service grants. In the case of pergunnah servants, I think this is a mistake. The huqs and roosooms or enams granted to both pergunnah and village servants should not be considered divisible property, as it entirely frustrates the object for which the grant was made, and merely maintains in a state of pauperism a class of useless stipendiaries.

"I believe in like manner that the whole class of yeomeahdars might be brought into one category. Where a yeomeah is held in lieu of a resumed jageer the claim might be of permanent tenure, but most yeomeahs are merely charitable gratuities to individuals, and should have ceased on the death of the original grantee. Those now held by successors should be reduced about 5 per cent. and cease on the death of present incumbents.

"Were all this clearly understood, the labors of the Enam Commissioner would be much reduced, and under proper ma-

nagement might be brought to a conclusion in three or four years."

The Commissioner should have an assistant in each district.

Boundaries are nearly complete in the Raichore Doab, but little has been accomplished in other districts.

Education.—No progress has been made except in Raichore, in which 41 new schools have been started and 12 qualified teachers sent out from Lingsoogoor. This has been effected without Government funds, though an expenditure of Rs. 780 a month has since been allowed. The course of education now includes reading, writing and spelling.

Public Works.—A large and expensive establishment has been organized, but no works have been carried on. Funds may be obtained from the bankers at five per cent. and the great military road from Sholapore to Hyderabad will be finished by the end of the year. As soon as the Railway reaches Sholapore Hyderabad will be three days from Bombay. The canal connection of the Moosa with a large tank near Secunderabad called Hoossain Saugar, will also, it is hoped, be opened this year, funds amounting to Rs. 1,43,643 having been provided by the Nizam's Minister. This Canal is 31 miles long, and will provide water for 24,000 miles of wet cultivation. Village roads are advancing, specially in the Dharaseo district where the expenditure has exceeded the village funds.

Finance.—The financial details are added, and are summarized in the table at page 151.

Political.—The Assigned Districts were not affected by the mutinies, except in the Raichore Doab where treasonable machinations were carried on for two or three months.

The population of the districts is returned at 19,72,291.

There are "seven vaccinators for the whole of the Assigned Districts, and the monthly expense of the establishment amounts to Rupees 147.

"The number of successful vaccinations performed by the establishment during last year amounts to 2,436, the average percentage of failures to 19½, the average cost per cent. to Company's Rupees 54-11-5."

The people dislike vaccination extremely, and to this the failure of the department must be principally ascribed.

THE ADMINISTRATION OF MYSORE.

1857-58.

Civil Justice.—"The number of original civil suits filed and disposed of in the several Courts during the last year, is as follows:—

Classes of Courts.	Remained on the file on 30th April, 1857.	Filed from 1st May, 1857 to 30th April, 1858.	Total.	Disposed of from 1st May, 1857 to 30th April, 1858.		Total.	Remaining on 30th April, 1858.	Percentage in favor of Plaintiffs.
				In favor of Plaintiffs.	In favor of Defendants.			
Superintendent's Court, ...	10	13	23	5	7	21	11	41.7
Moonsiffs' do.,	249	467	716	407	139	546	170	74.5
Talook Courts,	2,373	10,797	13,170	9,762	1,927	11,689	1,481	83.5
Hoozoor Adawlut, ...	...	1	1	...	...	...	1	...
Total, ...	2,632	11,278	13,910	10,174	2,073	12,247	1,663	83.

The total amount at stake was Rs. 15,09,154. Suits were disposed of last year more speedily than before.

Time since Institution.	No. disposed of in 1857-58.
"Within three months after being filed, ...	7,938
„ six „	2,045
„ one year, ...	1,306
„ two years, ...	651
After two years, ...	307
Total, ...	12,247"

The appeals are equal to nine per cent. of the decrees, and to 15 per cent. of appealable cases.

Criminal Justice.—"The cases filed and disposed of during the last year, as well as those remaining in arrears at the end of it, are classified as follows:—

Classification of Courts.	No. of Cases which remained in arrears on 30th April, 1857.	Do. filed from 1st May, 1857 to 30th April, 1858.	Total.	No. of Cases disposed of from 1st May, 1857 to 30th April, 1858.	No. of Prisoners in these Cases.	No. Convicted.	Percentage of Convictions.	No. of Cases remaining in arrears on 30th April, 1848.	No. of Prisoners in these Cases.
Crimes against the person, ...	48	569	617	576	1,718	703	61	41	131
Crimes against property,... ...	124	289	3,015	2,796	5,478	2,449	45	219	6
Miscellaneous, ...	19	716	735	706	1,252	935	75	29	61
Petty Cases, ...	80	8,271	8,351	8,248	16,745	11,786	70	103	314
Total, ...	271	12,447	12,718	12,326	25,193	15,873	63	392	1,032

"Of the whole of 15,873 persons against whom sentences were passed last year, 13,012 individuals were simply fined, 49 were flogged and released, 8 were banished the jurisdiction, 31 were merely discharged from the Government service, and 1 was sent to the Lunatic Asylum, making a total of 1,310, which leaves 2,772 to be accounted for; eight of these were hanged, and 6 transported for life. The remainder, being in number 2,758 or 17 per cent., were sentenced to various periods of imprisonment.

Jails.—"In the Jails of this territory there were 1,694 prisoners under sentence and awaiting sentence at the beginning of the last year, and 6,008 persons were committed to them during the year, making a total of 7,702. Of these 1,352 persons were released on the expiration of the period of their sentences; 107 died in the Jails; 6 escaped from them; 167 were transferred to other authorities, chiefly the Military Department, by which the

offences they were charged with were cognizable; 3,356 were acquitted and released; 31 who were public servants were dismissed the service and released; 16 were flogged and released; 96 were released on bail; 852 were fined and released; 10 were expelled the boundary; 7 were hanged; and 17 were transported for life; making a total of 6,017. At the end of the year 1,685 prisoners were left in the Jails, of whom 1,465 were under sentences of imprisonment and 220 awaiting sentences." Of the prisoners labouring in Jail 27 per cent. died, while of these who worked on the roads only 1 per cent. died. The cost of each prisoner in 1857-58 was Rs. 39-14. These returns do not include Bangalore, in which station Civil and Criminal decisions are given by the Superintendent of Police. "At the beginning of the last year, 64 civil suits were pending before the Superintendent of Police, and 1,316 suits were filed during the year, making a total of 1,380 suits; 959 of them were disposed of, which include 790 cases, in which the claims were fully allowed, 125 in which they were partly allowed, and 44 in which they were fully disallowed. The suits disposed of last year are less than those disposed of in the previous year by 254. Eighty-six suits remained in arrears at the end of the last year, a number exceeding those which were in arrears at the end of the previous year by 22. In two cases, appeals were admitted last year by the Judicial Commissioner from the decrees of the Superintendent of Police, in one of which the original decree was confirmed and in the other reversed. At the beginning of the last year there were 45 criminal cases pending before that officer, 2,598 cases were filed during the year, making a total of 2,643, of which 2,581 were disposed of, leaving 62 in arrears at the end of the year, in which 104 prisoners were involved. He imposed fines in criminal cases amounting to Rs. 3,130-11-8 and levied Rs. 2,491-12-4."

The Superintendent is also Commissariat Officer, an arrangement which, from the increased importance of Bangalore, it will soon be advisable to terminate.

Revenue.—"The demand or revenue settlement for the year, on account of current revenue, exclusive of arrears, amounts to Rs. 84,99,226-4 as exhibited below:—

ORDINARY REVENUE.

Land Revenue,	...	...	..	58,27,105	15	6
Sayer, ...	...	...	..	8,66,961	5	9
Abkary, ...	..	...	...	8,22,474	6	6
Miscellaneous,	...	...	...	6,17,098	10	0

EXTRA REVENUE.

Sandal-wood, ...	1,66,033	2	7
Miscellaneous sources, ...	1,91,760	6	6
Tuccavy, ...	7,792	5	2
Total Rupees ...	84,99,226	4	0"

This is the sixth bad season in succession, and a murrain has raged among the cattle, killing 90,683 domestic animals in the Bangalore district alone. The collections including arrears amount to Rs. 85,91,588-4-10 showing a decrease of Rs. 33,490-13-11; this is due however to the large outstanding balances collected last year. The following shews the revenue of Mysore since annexation :—

"1831-32,	Company's Rupees, ...	43,56,337	4	0
1832-33,	ditto, ...	55,56,337	8	9
1833-34,	ditto, ...	58,25,756	8	0
1834-35,	ditto, ...	67,70,277	3	6
1835-36,	ditto, ...	76,87,751	9	8
1836-37,	ditto, ...	71,13,703	13	7
1837-38,	ditto, ...	69,30,581	8	6
1838-39,	ditto, ...	71,91,818	7	0
1839-40,	ditto, ...	77,50,439	6	11
1840-41,	ditto, ...	76,48,125	7	5
1841-42,	ditto, ...	75,66,381	6	5
1842-43,	ditto, ...	75,64,855	1	5
1843-44,	ditto, ...	72,59,119	7	1
1844-45,	ditto, ..	72,89,665	10	0
1845-46,	ditto, ...	71,00,370	3	7
1846-47,	ditto, ...	76,04,072	14	4
1847-48,	ditto, ...	79,26,751	6	11
1848-49,	ditto, ...	80,08,339	6	8
1849-50,	ditto, ...	80,03,953	11	0
1850-51,	ditto, ...	78,37,219	14	0
1851-52,	ditto, ...	80,18,977	7	3
1852-53,	ditto, ...	78,07,926	11	9
1853-54,	ditto, ...	82,07,926	11	9
1854-55,	ditto, ...	78,62,386	14	7
1855-56,	ditto, ...	,,83,88,954	1	0
1856-57,	ditto, ...	82,88,523	6	0
1857-58,	ditto, ...	85,77,938	1	11"

[*The above is calculated up to 30th June in each year.*]

Education.—"356 superior pupils were educated in the Government superior schools; 345 in private superior schools receiving aid from Government; and 410 in inferior private schools; making a total of 1,649. Of these 1,175 were Hindoos; 72 Mahome-

dans; and 402 of other classes. The average attendance amounted to 1,294. 911 pupils were instructed in English; 704 in Canarese; 102 in Tamil; and 26 in Hindustani." No grants in aid have been asked for except in the case of two schools in Bangalore. In Coorg an English school under Mr. Moegling is attended by boys of the best families, and not the slightest feeling is exhibited against the school.

Public Works.—No new works were commenced, but roads have been kept up and improved, bungalows built, and bridges carried. Data are being collected for the proposed lake at Maury Conway, a great irrigation work.

Finance.—The financial details are added (summarized above). The Rajah's fifth share of the revenues amounted during the year 1857-58 to Rs 9,58,149 making with his stipend of Rs. 3,50,000 Rs. 13,08,149 in the year.

Military.—The total strength of the Mysore Infantry was 2056, and of Cavalry—Silladar Horse—2987, costing together 1,12,61,333.

Population.—The population of Mysore in this year was 37,38,927, of whom 1,81,817 are Mussalmans. The towns contain

	Population.	*Houses.*
"Bangalore Cusbah, ...	42,888	6,075
,, Cantonment,... ...	1,32,742	17,821
Mysore Town, ...	55,761	11,130
Seringapatam, ...	14,928	5,212
Toomkoor Town, ...	9,339	2,362
Shimooga ,, ...	14,186	2,615"

A new system of forest conservancy has been begun and promises well. There has been a slight increase in vaccination, 88,194 persons having been vaccinated with 4000 failures.

THE TELEGRAPH DEPARTMENT.

1857-58.

On 28th February, says Sir R. O'Shaughnessy, Superintendent of Electric Telegraphs, "the telegraph lines constructed under my direction during the two preceding years extended in unbroken range from Saugor Light-house, at the mouth of the Hooghly to Peshawar, beyond the Indus, *via* Calcutta, Benares, Cawnpore, Agra, Delhi, and Lahore. From Agra the line stretched south to Gwalior, Indore, and Bombay; and from Bombay traversed the Deccan, *via* Poona, Belgaum, and Bella-

ry, to Bangalore and Madras. Lastly, from Bangalore a line ran south to Mysore and the Neilgherry Mountains.

"The total length of these great lines was 3756 miles, with 55 offices. The monthly income in cash receipts for messages was Rupees 17,690. The monthly value of service messages, averaged Rupees 6,557. Total value of business done, Rs. 23,247."

In 1856, 680 miles were added connecting Mysore and Calicut, Bellary and Hyderabad, Madras and Pondicherry, Nassick and Surat. 300 more were constructed by the East India Railway Company from Patna to Burdwan. The mutinies which broke out on 10th May, 1857, caused great havoc. The line from Meerut to Delhi was destroyed on 11th May, from Cawnpore to Agra in 1st week of June, between Agra and Indore in 1st week of July. "By this time the whole line from Agra to Indore, 400 miles; Agra to Cawnpore, 180 miles; and Agra to Delhi, 178 miles, had been totally demolished, the posts used for firewood, the wire cut up for slugs or bullets, or rendered perfectly unserviceable for telegraph purposes.

"From Cawnpore towards Bengal, between Cawnpore and Allahabad, everything but the iron-wood posts from Arracan, was destroyed. These posts were too heavy to be carried away, too hard to be cut up, and were almost incombustible, so that except a mere charring, they have escaped, and are again in use."

The lines were temporarily reconstructed with extraordinary rapidity and determination. A solid reconstruction is now in progress. Many of the most valuable assistants of the department were murdered, many took to military life, and all acquired a habit of independence, and of disobeying the central authority. "But by far the most interesting occurrence in the story of the restoration of our lines is found in the dashing exploit of Captain Stewart, Mr. Harrington, Mr. McIntyre, and Mr. Devere, in running up a flying line from Cawnpore to Lucknow in the last advance of the Commander-in-Chief on that city. The cool intrepidity and ready resources displayed by Captain Stewart on that occasion, gained for him the hearty applause of the whole army. I append his report, to which I refer with much pleasure, as one of the best proofs yet given of the value of this department in military operations as well as in its political and civil bearings."

There are now (31st October, 1858) 7155 miles open and at work. The only line in bad order is the Calcutta and Madras line which runs through a difficult country flooded for great part of the line. 2,154 more miles are under construction and 1404 more have been sanctioned. Omitting the Ceylon lines

the following paragraph shews the work accomplished and in-progress :—

	Miles.
"Lines open up to 1856, ...	3,756
Do in 1856, ...	680
From 1856 to present date, ...	2,719
Under construction now, ...	2,154
To be commenced and finished this season,	1,404
Total Miles ...	10,713"

The Superintendent discusses standards, river crossings, insulators and cables, and proceeds to state as the result of experience that one first class Inspector is absolutely necessary for every 500 miles of line. The monthly cost of all establishments is now

Pay, ...	63,427
Rent, and working expenses, ...	17,815
Rs.	81,233

A sum which will be covered by receipts twelve months after tranquillity is established. There are now 45 stations at which the Morse instruments are used. "We accordingly want nothing now but about 200 more instruments, of which 100 have been applied for to Berlin, and 100 will be made in India, and also about 100 more trained signallers, now under instruction here, to bring the Morse system in full operation over all India and Ceylon. A few months more will accomplish this, and enable us to send a message of 100 words in ten minutes from Calcutta to Bombay, and from Galle to Peshawar with the most absolute certainty, and exemption from all ordinary causes of error and delay."

The assistants brought out for the Morse instruments have as a rule succeeded. Appendices are added describing the flying line carried by Captain Stewart with the Commander-in-Chief into Lucknow, and which was in working order in the Kaiserbagh two hours after its capture; also Mr. Wickham's success in running a submarine cable across the Straits of Manaar.

REPORT ON THE ADMINISTRATION OF THE SALT DEPARTMENT.

1857-58.

Mr. E. T. Trevor, Secretary to the Board of Revenue, on the 12th January, 1859, submits statements showing the results of the administration of the Salt Department in Bengal and Orissa for the year ending with the 30th September, 1858.

The quantity of Salt in store in Bengal on 1st October, 1857, as compared with the same date on the previous year, was

	Mds.	*Srs.*	*Cks.*
In 1856, ...	28,55,701	23	9
„ 1857, ...	35,22,374	13	10

The preponderance of the quantity in store in 1857 relates chiefly to foreign Salt in bond, owing to the unprecedented importations of the previous year.

The quantity imported and sold, during the two years, was as follows:—

Imported.

	Mds.	*Srs.*	*Cks.*
In 1856-57, ...	76,68,338	18	4
„ 1857-58, ...	72,62,125	5	1

The decrease of 4 lacs of maunds refers almost exclusively to sea-imported Salt.

Sold.

	Mds.	*Srs.*	*Cks.*
In 1856-57, ...	69,40,083	28	5¼
„ 1857-58, ...	68,92,882	24	5¼

"The decrease (2½ lacs maunds) in the sales from the Government depots, which refers chiefly to the Hidgellee Salt, is believed to have been partially caused by a corresponding increase (2 lacs maunds) in the sales of imported Salt: so that the general result is not remarkably affected

"The following figures show the *taidad*—or quantity of Salt required to be provided by each Agency—and the actual outturn, for the past season:—

	Taidads.	Out-turns.			Excess.	Deficiency.		
	Mds.	*Mds.*	*Srs.*	*Cks.*	*Mds.*	*Mds.*	*Srs.*	*Cks.*
Hidgellee, ...	11,00,000	10,48,624	0	0	0	51,376	0	0
Tumlook, ...	9,00,000	8,09,050	25	0	0	90,949	15	0
Chittagong, ...	8,00,000	4,60,501	36	5	0	3,39,498	3	11
Balasore, ...	7,00,000	6,18,873	0	0	0	81,127	0	0
Cuttack, ...	4,50,000	3,21,911	10	0	0	1,28,088	30	0
Pooree, ...	3,00,000	2,75,607	15	0	0	24,392	25	0
Ditto (Bay), ...	4,00,000	5,12,702	0	0	1,12,702	0	0	0
Total, ...	46,50,000	40,47,270	6	5	1,12,702	7,15,431	33	11

The deficiency, which refers to boiled Salt only, is ascribed by the Board partly to the very unfavourable weather during the season of manufacture, partly to the mutiny of the native troops at Chittagong which delayed the commencement of the manufacture, and partly to the want of fuel in Balasore.

"The sole manufacturer under the new Excise Rules during the year under report was Mr. H. Fraser, who made 38,000 maunds of Salt, or 8,000 maunds more than was produced in Sagur Island in the preceding year, and somewhat in excess of the out-turn of any year."

In the sales of Salt there has been a decrease of 117 maunds in Chittagong. In the undermentioned Divisions there has been an increase of 17,294 maunds:—

"Bullooah, ...	1,379
Backergunge, ...	1,071
Jessore, ...	7,360
Baugundy, ...	141
Barriepore, ...	3,299
Calcutta, ...	307
Western, ...	459
Midnapore, ...	2,606
Jellasore, ...	672
Total, ...	17,294"

In Tumlook there was a decrease of 575 maunds, in Balasore of 6,164 maunds, in Central Cuttack of 50,180 maunds, owing to the disturbed state of the interior and the extreme unpopularity of the Kolerow Golahs. In the Pooree Agency there was an increase in the sales of 40,006 maunds. The confiscations during the year as compared with the past year were as follows:—

	Attached.	*Released.*	*Confiscated.*
	Mds.	*Mds.*	*Mds.*
In 1856-57, ...	14,685	12,172	2,536
„ 1857-58, ...	13,766	11,758	2,063

The cases prosecuted to conviction were 1,187, and the number of prisoners 1,594. More than half of the Salt confiscated (1,128 maunds) refers to the Jessore Division. The following are the financial results of the year as compared with those of the preceding:—

	Receipts.	*Disbts.*	*Net Revenue.*
"1856-57, ...	1,07,03,617	43,00,599	64,03,018
1857-58, ...	1,02,98,755	38,51,072	64,47,683"

On the 1st October, 1858, 37,21,227 maunds, 25 seers and 7 chittacks of Salt, were in store.

"The Salt imported by sea on private account, during the past three months, or the 1st quarter of 1858-59, is shown below:—

	Mds.	*Srs.*	*Cks.*
"Great Britain, ...	10,18,777	15	3
France, ...	35,361	26	11
Spain, ...	21,777	31	2
Mauritius, ...	272	8	14
Red Sea and Arabian Sea, ...	3,71,372	33	1
Bombay, ...	35,579	0	0
Ceylon, ...	10,126	26	11
Madras, ...	1,01,735	22	4
	15,95,003	3	14"

The provision for the current season may be summed up thus:—

	Maunds.
Provided by Government, ...	35,50,000
In store on 1st October, ...	37,21,227
Imports for first Quarter, ...	15,95,000
„ Expected, ...	15,00,000
Salt from Sinde, ...	1,53,773
Maunds,	1,05,20,000

REVENUE ADMINISTRATION REPORT OF THE NORTH-WESTERN PROVINCES.

1857-58.

This Report was submitted by the Secretary to the Sudder Board of Revenue, North-Western Provinces. The rains of 1856, upon which the rubbee or spring crops of 1857 mainly depended, were generally abundant. In the district of Banda the fall was excessive. The muhawut or winter rain was much as usual; the out-turn of the khurreef or autumn crops was above average. If drought had been superadded to the calamities of the rebellion, the effects would have been terrible.

Land Revenue.—"Of a demand of Rs. 4,20,6[illegible],102, Rs. 3,11,30,304 was realized to 30th April last, leaving a balance of Rs. 1,09,32,798, which has been reduced by subsequent collections to Rs. 88,70,697. The returns for the Meerut Division con-

trast favorably with those of others. Although, with the exception of Dehra Doon, each district has been the scene of violence and plunder, of invasion by the enemy, and in Boolundshuhur and Allygurh of attempts to establish rebel authority, there has been little defalcation of land revenue.

"The return for the district of Etawah, where for a considerable time suspension of collections was a measure of necessary prudence, affords a remarkable illustration of good faith, or at least of consciousness that the State's fair demands must ultimately be satisfied."

Balances.—"Of the actual balances it may be fairly estimated that 38 lakhs will be realized in course of time, and the actual deficiency will thus be about half a million sterling. No inconsiderable portion consists of nominal items, the demands on estates which have suffered by diluvion, or on tracts of forest and waste which have been relinquished, or on estates in Bundelkhund and in the Saugor and Jhansie Divisions, subject to revision of assessment. To these large additions have been made of nominal balances against estates of loyal landholders, who have armed in defence and support of local authority. The Board have discouraged any general unspecific recommendations of remission, for such measures adopted without local enquiry mischievously weaken the sense of the obligations of the settlement contract."

"*Coercive Measures.*—In most districts there was a diminution of dustuck processes. Sales were made in very few instances. Transfers in putteedaree estates were increased. In the Jubbulpore Division, where the malgoozars have not the proprietary right, as in the Regulation Districts, competent lessees were put in charge of estates in place of those who proved unable to manage them or joined in the rebellion. The increase in the number of farms is thus more apparent than real.

Abkaree.—"The loss in this branch of revenue may be set down at fifty per cent. of the average annual income." Few of the abkars or distillers work on their own capital, but depend for advances on those who have suffered largely in the rebellion. They have but little inducement to expose the illicit manufacture, yet the elasticity of the revenue is remarkable.

Stamps.—"The defalcation of the stamp revenue is about two-thirds of the average return. The suspension of Civil business and the stagnation of trade sufficiently explain this result."

Sayer.—"The statement of the revenue derived from forest tracts and quarries is imperfect, as it does not include the income derivable from the principal forest tracts, the controul of which has been transferred to the Director General of Canals"

The actual losses in cash sustained by plunder in 1857-58

was a million sterling. In India agricultural operations are little affected by wars and tumults. Hence only in Bundelcund, and in the districts of the Doab and north of the Ganges agricultural resources were seriously impaired. "The trade of the country may be said almost throughout the year to have been suspended, the main arteries of commerce, the Ganges and Jumna, having been tied up by the enemies of the State. Futtehgurh alone is mentioned as having retained its customary traffic with the districts of Rohilkhund."

On the conduct of the people it is remarked, that the "Mahomedans and the Hindoos of the dominant castes, especially in the districts from which the native army has been recruited, and on the borders of Oude, were generally actively disaffected. The inferior classes were passive and indifferent. Predatory clans, true to their traditions, relapsed at once into former habits of wanton license, indiscriminate plunder, and ruthless violence. The baser populace of towns and villages followed their example, not unfrequently led on by those whose duty was to restrain them, for the gratification of private revenge, or at least having a license to ravage elsewhere, so long as they did no mischief at home. The traders, the money-lenders, the men of substance, were either victims or compounded for their safety with parties strong enough to defend them. Old feuds were revived; transfers of landed property or occupation were summarily cancelled: all was anarchy and confusion. Yet with all this, agricultural industry went on much as usual."

There were however many honourable and prominent exceptions. The testimony to the conduct of officials is on the whole favourable. The inferior men of the local establishments were faithless in numbers. The grand total of land revenue demands for the year was Rs. 4,20,63,102, of this there was collected

In the year, ...	3,11,30,304
Since, ...	20,62,101
	3,31,92,405
Leaving an actual balance of Rs. ...	88,70,697
Dustucks issued in 1855-56, ...	1,73,928
do. in 1857-58, ...	1,06,738
Tulubana realized in 1855-56, ...	1,30,023
do. in 1857-58, ...	74,887-4

Estates sold for the recovery of arrears of revenue in

	Cases.	Total Jumma.	Total Balance.
1855-56, ...	25	18,179	12,169
1857-58, ...	4	709	1,322

The demands of abkaree revenue were 15,64,488, the collections in the year and since 10,89,003, and the actual balance 4,75,485. Of estates farmed for arrears there were

	Cases.	Total Jumma.	Total Balance.
1855-56, ...	96	49,226	23,149
1857-58, ...	327½	3,56,068	1,10,666

Of sequestration there were

	Cases.	Total Jumma.	Total Balance.
1855-56, ...	41	41,709	12,631
1857-58, ...	69	37,147	19,533

Of losses there were

Cash, ...	87,16,065	13	0
Value of Stamps, ...	1,65,482	14	6
„ „ Postage Labels, ...	1,437	10	6
„ „ Opium, ...	6,269	13	6
„ „ Promissory Notes, ...	2,68,000	0	0

Of transfers of putnees there were

	Cases.	Total Jumma.	Total Balance.
1855-56,... ...	134	23,473	9,489
1857-58, ...	189	77,980	25,732

The net revenue of stamps was 4,17,126 against 13,56,060 in 1855-56.

The miscellaneous sayer revenue was 67,933 against 1,97,375 in 1855-56.

MADRAS MEDICAL COLLEGE.

Madras Records, No. LVII.

Mr. Arbuthnot, the Director of Public Instruction, submits the Annual Report for the Session 1857-58. The report of the College Council is not favorable. The conduct of the students had been marked by carelessness and irregularity, which may be ascribed to their extreme youth, their premature removal, and the number of the subjects they are required to study. The Director recommends that the first of these be prevented by admitting no student under the age of 17 years. The second originated in the pressing demand for medical subordinates. The number of subjects was little in excess of the usual course. A

committee of medical officers unconnected with the College conducted the annual examination. The result was on the whole more satisfactory than might have been expected from the remarks of the Professors. Of eight candidates who presented themselves for diplomas six passed with great credit. The result of the first examination of candidates for the diploma was less satisfactory. Of seven who presented themselves only one passed.

The College Council draw attention to the great want of additional rooms for lectures and other purposes. A Primary Medical School was opened on 1st November, 1857, to impart an elementary knowledge of Medicine and some training in English to boys. A committee of the College Professors was satisfied with the progress of its pupils. Out of 50 boys, 40 were considered fit for promotion to the Medical College. The pupils attended regularly at the Vepery Hospital and were there taught to compound and exhibit medicines, to bandage and dress ulcers, &c.

The report goes on to view the correspondence which took place during the previous year with reference to the course of instruction most suitable for Military medical students. The examiners of the College in April, 1857, recorded their opinion that the course of study prescribed for native medical pupils and apprentices was unnecessarily high. Major General Beresford, and the present Commander-in-Chief, concurred in this. After suggesting a plan which was objected to by the most able and experienced officers in the Medical Department, the Director finally recommends the following revised curriculum:—

FOR MEDICAL APPRENTICES.

1st Year.	*2nd Year.*	*3rd Year.*
Chemistry.	Anatomy.	Medicine.
Anatomy.	Physiology.	Surgery.
	Materia Medica.	Clinical Medicine.
	Medical Botany.	„ Surgery.
	Surgery.	Midwifery and diseases of women and children.
	Clinical Surgery.	Ophthalmic Surgery.

FOR NATIVE MEDICAL PUPILS.

1st Year.	*2nd Year.*	*3rd Year.*
Chemistry.	Anatomy.	Medicine.
Anatomy.	Materia Medica.	Surgery.
	Medical Botany.	Clinical Medicine.
	Surgery.	„ Surgery.
	Clinical Surgery.	Midwifery and diseases of women and children.

To meet the difficulty of obtaining candidates for the medi-

cal service possessing a knowledge of English, and intelligence sufficient to enable them to profit by the instruction imparted in the College, it is suggested that 50 medical scholarships of Rs. 3 per month be sanctioned, to be held at towns where there is a Government zillah school by youths who, after pursuing their studies both under the school-master and under the eye of the Surgeon in charge of the Hospital for a certain period, should be drafted off to the Medical College at Madras. This would create a supply of lads for the subordinate medical service with higher qualifications, both literary and professional, than now engage themselves. The Director recommends that a native Surgeon be appointed to the office of College Tutor on a salary of 100 Rs. per month, to assist the students in preparing for the lectures.

"The preceding suggestions have reference exclusively to the education of the Military medical students. As respects the course of instruction of candidates for native Surgeoncies and of other candidates for the diploma of the College, no alteration is proposed." As to the latter the Director thinks that it would "be more satisfactory in every point of view, and certainly more economical, to abolish the grade of native Surgeon and to establish, in its stead, a grade of Sub-Assistant Surgeons which shall be open to all classes, abolishing at the same time the caste distinction which at present exists between the grades of Apothecary and Dresser."

The Director's report concludes with some remarks as to his own position in relation to the Medical College.

The report of the College Council follows. The total number of students at the end of the year was 145. "In October, 1857, the formal recognition of the Madras Medical College by the Colleges of Surgeons in Dublin and Edinburgh was received." The Professor of Anatomy delivered 74 lectures and held 26 examinations; 88 subjects were dissected. The course of the Professor of Physiology consisted of 75 lectures and 21 examinations. The Professor of Chemistry gave 140 lectures on Inorganic Chemistry. The Professor of Botany delivered 30 lectures and held 5 examinations. In Materia Medica 100 lectures were delivered to and 20 examinations held in the senior and 1st classes. The Professor of Midwifery and Diseases of the Eye reports that he delivered 80 lectures on the former and 20 in the latter. There were 120 lectures and examinations on Surgery, and 98 in Medecine. The course on Medical Jurisprudence consisted of 57 lectures and 12 examinations. "The average monthly expenses of the College, including the salaries of the Professors, Assistants, Servants and Contingent Expenses, exclusive of supplies from England, amount to Ru-

pees 1,697-1-1." This shews a decrease, as compared with the previous year of Rs. 153-1-4. In reviewing Mr. Arbuthnot's report, the Madras Government refers his suggestions as to medical scholarships and a revised curriculum to the Military Department, approves of the appointment of a College Tutor, and promises to refer it to the Government of India.

THE MADRAS RAILWAY.

1857.

Madras Records, No. LIII—A.

On 21st May, 1858, the Governor in Council reviewing the reports, notices that "the expenditure on account of construction on the South-west line has been Rupees 28,55,865 during the past year, and that on account of superintendence, Rupees 3,67,250, or nearly 13 per cent. on the expenditure. The progress of work in 1857 contrasts favorably with that executed in the previous year 1856, both in earth-work and masonry. In the revenue account the total receipts during the year by coaching and goods amounted to Rupees 3,58,102-9-8, and the total working expenses, including Rupees 1,607-8-6 paid in England chargeable to this account, to Rupees 2,29,043-8-0, showing a balance of Rupees 1,29,059-1-8 to be credited to the Railway Company in payment of interest already advanced on the capital."

The appendices added shew that up to 1857 the work done amounted to 73,63,710 cubic yards earth-work, and 2,64,063 cubic yards masonry, 19,964 yards permanent way and 11,20,890 cubic yards of ballasting; 9,84,975 yards of fencing had also been put up; while the following amount of stock has been collected:—

Rolling Stock.

Particulars.	Completed up to 1857.	During 1857.	Total.
"Passenger Stock."			
1st Class Carriages,	3	...	3
Composite do.	8	...	8
2nd Class do.	4	...	4
3rd do. do.	21	2	23
Carriage Trucks,	4	...	4
Break Vans.,	3	2	5
Horse Boxes,	5	...	5
Total	48	4	52
"Goods Stock."			
Ballast wagons,	60	...	60
Open do.	90	10	100
Coke do.	20	10	30
Hopper do.	5	..	5
Covered do.	50	...	50
Cattle do.	10	20	30
Break vans,	6	3	9
Plat-form Trucks,	20	...	20
Timber do.	10	...	10
Gun Powder van,	1	..	1
Total,	272	43	315

The total expenditure up to 1857 had been Rs. 60,56,037.
The rates paid were

	Maximum.	Minimum.
	Areas.	
Earth work, per c. y.	3-6.	1-6.
Masonry, ..	Rs. 18-6-7.	3-12-9.

The masonry rates are only estimated. During 1857 the cost of superintendence was 13 per cent. on expenditure.

On 17th May, 1858, Mr. J. M. Heppel, Chief Engineer, reports on the condition of each of the 17 sections of the work up to the end of 1857, hopes to open the lines to Salem on one side, and Coimbatore on the other by the end of 1859, and remarks that the cause of delay is the deficiency in the supply of sleepers and permanent way.

On 15th May, 1858, the Traffic Manager, Mr. H. A. Fletcher reports the receipts from passengers as follows :—

	First Class.			Second Class.			Third Class.			Total.		
	No.	Amount.		No.	Amount.		No.	Amount.		No.	Amount.	
July, ...	103	612	10 6	515	1,060	9 6	16,550	15,051	8 9	17,168	16,724	12 9
Augt. ...	88	446	11 6	478	1,048	4 3	15,594	13,377	10 7	16,160	14,872	10 4
Sept. ...	97	639	4 6	411	949	14 9	13,899	11,814	15 0	14,407	13,404	2 3
Oct. ...	111	683	7 0	377	1,006	10 3	12,392	11,061	11 6	12,880	12,751	12 9
Nov. ...	96	543	0 0	293	660	4 6	14,287	12,568	9 7	14,676	13,771	14 1
Dec. ...	112	653	10 0	594	1,320	1 6	17,924	15,370	5 2	18,630	17,344	0 8

Equal to 182.7-10 per mile per mensem, on 81 miles. The parcel receipts were for the half year ending 31st December, 1857, Rs. 149-11 or Re. 1-13-7 per mile. The rates, Mr. Fletcher considers, are almost prohibitory. The amount received for horses, carriages and goods, was Rs. 690-8-3, and for goods, 66,722-3-7 paid on 19,780 tons, equal to 137-4-7 per mile per mensem. Mr. Fletcher is of opinion that greater facilities are required for the collection of goods. Reports are added describing the operations in each district, and official correspondence on sleepers, accidents in blasting, &c.

THE ADMINISTRATION OF CRIMINAL JUSTICE IN THE MADRAS PRESIDENCY.

1857.

This is not a Report but a series of tables submitted by the Judges of the Court of Foujdaree Udalut to the Governor in Council. Under the head of each district a statement of petty offences. and of crimes and misdemeanours for the year 1857 is given, and a list of the Judges, Ameens, Magistrates, and Assistants, accompanies the statements. The following are the most important facts.

The Village Police investigated 14,821 cases, of which 6,826 alone were convicted and punished. The District Police convicted and punished 51,448 cases, and referred 8,485 to higher Courts The subordinate Judges, Principal Sudder Ameens and Sudder Ameens, acquitted 3,156 cases, convicted 1,833, referred to Session Judges 3,173, and disposed of otherwise 43, making a total of 8,433 with 228 under trial on 1st December. The Magistrates, Joint Magistrates and Assistant Magistrates took up 7,350 cases; of these 413 were discharged without trial, 3,523 acquitted, 2,577 convicted, 748 committed to subordinate Criminal Courts, 8 otherwise disposed of, and 81 under trial on 31st December. The Session Judges disposed of 3,725 cases, of which 1,834 were acquitted and 1,021 convicted The Foujdaree Udalut sat on 423 cases

of these 122 were released unconditionally, 67 on security, 273 were convicted, 2 remanded, and 3 otherwise disposed of, leaving 16 under trial at the end of the year. The sentences passed on those convicted were as follows:—76 were imprisoned for 7 years, 36 for 14 years, and 3 for life; 77 were transported and 59 suffered death. In all the Courts the tables shew a gradual increase in the number of cases since 1854:—

AVERAGE DURATION OF CASES REFERRED TO THE FOUJDAREE UDALUT.

Years.	From Apprehension to Commitment.	From Commitment to Reference.	From Transference to Receipt.	From Receipt of Reference to Sentence.	Total from Apprehension.
	Days.	Days.	Days.	Days.	Days.
1853,	29	106	6	7	148
1854,	21	71	9	5	106
1855,	22	50	7	5	84
1856,	20	53	7	8	88
1857,	21	55	7	10	93

Offences.—Under the first head of offences against the person the most noticeable facts are these. 797 were charged with murder and 604 acquitted; 140 with homicide and 125 acquitted; 1,044 with assault with wounding and 767 acquitted; 109 with rape and 106 acquitted; 91 with abortion and all acquitted; 27 with the sale of married women and 13 acquitted; 66 with torture and 59 acquitted; 10,115 with affray and 4,327 acquitted. 1,03,550 with petty assault and 61,667 acquitted. Under the second class of offences against property committed with violence, the following are the main points:—

Offence.	*Cases.*	*Acquitted.*
Dacoity, ...	4,257	3,787
Highway Robbery,	1,547	1,322
Affray, ...	169	126

Under the third class of offences against property committed without violence.

Offence.	*Cases.*	*Acquitted.*
Burglary, ...	4,651	3,990
Theft, ...	16,423	9,736
Receiving Stolen Goods,	1,313	901
Fraud, ...	1,080	704

Under the fourth class of malicious offences against property.

Offence.	*Cases.*	*Acquitted.*
Arson, ...	628	612
Cattle-killing, ...	745	710

Under the fifth class of forgery and offences against the currency.

Offence.	*Cases.*	*Acquitted.*
Forgery, ...	367	343
Counterfeiting Coin,	15	11
Having do	52	43

Under the head of miscellaneous.

Offence.	*Cases.*	*Acquitted.*
Prison-breaking, ...	159	28
Perjury, ...	75	48
Riot, ...	85	60
Other offences, ...	6,652	1,980

PRISON RETURNS OF THE NORTH-WESTERN PROVINCES.

1856.

These Returns are a series of tables. The following are the most important facts. There are 34 jails, or one for each zillah, in the North-Western Provinces.

Total aggregate number of prisoners during 1856, 78,71,005

Daily average number, ... 21,505

Cost of Permanent Jail Establishment,	... Rs.	72,218 - 8 - 1
do. do. Guard, ...	„	1,45,959 - 5-10
„ Compensation in lieu of Prison labour,	„	27,783 - 9 - 3
„ Contingent jail Guard, ...	„	1,49,658 - 7 - 8
„ Miscellaneous charges including Doctor's travelling, &c.	„	32,430-12 - 9
„ Native Medicines, ...	„	2,354-15 - 4
„ Prison and Hospital Rations, ...	„	2,60,856 - 7 - 2
„ Clothing and Bedding, ...	„	38,194 - 6-11
„ Additions, Alterations and Repairs,	„	9,838 - 6 - 2
Total Jail expenditure, ...	Rs.	7,39,294-15 - 2

	Rs. As. P.
Average cost of Permanent Jail Guard *per head* per annum, ...	6-12 - 7
do. do. Contingent do.	6-15 - 4¼
Average cost of diet *per head* per day, ...	... 6½
do. do. per annum, ...	12 - 1-11
do. Clothing do. do.	1-12 - 5
Average total cost per head per annum, ...	34 - 6 - 0½
do. exclusive of compensation, jail establishment, guards and repairs, ...	22 - 7 - 8½

In the 11 jails of the Saugor and Nerbudda Territories, 3,672 was the daily average number of prisoners. The total jail expenditure was Rs. 1,35,711-3-5, the average cost of diet per day per head six and a half pice, and the average total cost per head per year Rs. 36-15-4. The total number of deaths in the North-west Jails was 2,151 being an average of 10.02 to strength and of 8.77 to sick. Of these 610 were from cholera or a ratio of 2.84 to strength. Of these there were in

	Cholera deaths.
Delhi, ...	18
Hissar, ...	9
Mozuffernuggur, ...	20
Meerut, ...	90
Bareilly, ...	67
Shahjehanpore, ...	30
Agra, ...	232
Etah, ...	14
Futtyghur, ...	36
Allahabad, ...	29
Bandah, ...	9
Mirzapore, ...	19
Benares, ...	7
Moradabad, ...	7

All the rest were under seven.

MADRAS LAND REVENUE REPORT.

1856-57.

On 12th February, 1859, the Governor of Madras in Council reviews the Land Revenue Report for Fusly, 1266. The general result shows an increase of Rs. 16,20,613 upon the report of last year, though there was a deficiency of rain in Tinnevelly, Coimbatore, and Bellary. Prices have fallen considerably, in the Ceded Districts as much as 27 per cent. The lands included in the ryots' holdings have been increased by 7,59,355 acres or 6¼ per cent. "The total revenue for the year amounted to upwards of five crores of Rupees; being about 16½ lakhs in excess of the previous year. Of this sum, Rupees 3,85,13,019 was on account of land; that under *ryotwárí* management produced in the Fusly under report Rupees 3,54,45,430, while the permanently settled revenue was 49,74,827. The rent of the amání villages, or those from one cause or another temporarily or permanently under the direct management of Government, was Rs. 83,094. And Rupees 4,56,51,828 or 91½ per cent. of the total revenue, or Rupees 5,00,13,388, were collected within the close of the Fusly."

The remissions amounted to forty-seven and a half lakhs, the amount slightly increasing with the increase of cultivation.

"Cotton and indigo cultivation has made some little progress in comparison with the year preceding that under report; but sugar-cane has, the Government regret to observe, declined, in spite of the opportunities afforded by the anicuts in Masulipatam and Rajahmundry; the area planted being but 32,637 acres; or 3,450 less than in the preceding year."

The abkaree rents exhibited an increase of Rs. 2,91,721, or 13 per cent. Owing to a new method of renting the farms the muhtarfa revenue had decreased by Rs. 8,395 through the abolition of the sheep and goat tax, the salt revenue (Rs. 53,15,023) has been steady, and the sea customs shew an increase of Rs. 8,78,01,31,256, being duty on salt. The frontier customs fell off slightly, and the stamp revenue increased by 56,601. "That with a demand of 385 lakhs, it should only have been necessary to sell property to the amount of Rupees 25,791, of which sum Rupees 9,013 represents the value of personal property, is matter for great satisfaction."

The charges of collection were Rs. 10-9 per cent. against Rs. 11-6 per cent. of the preceding year. "The next subject discussed by the Board is one of deep interest. It is the result, as regards extension of cultivation, and enhancement of the general prosperity of the people, which has taken place in conse-

quence of the liberal reductions of assessment made during the last four years in certain districts, amounting altogether to upwards of twenty lakhs of Rupees; of which more than half was foregone in South Arcot alone. The revenue realized, in spite of these remissions, is stated by the Board to have been higher than it ever has been before. They particularly notice the case of South Arcot, where the revenue exceeds by Rupees 33,975 the highest amount ever before attained, though upwards of ten lakhs of the demand was struck off. They notice also the garden cultivation on the sandy coast tracts of Guntoor; where the former repressive taxation was abolished by Extract Minutes' Consultation, 7th February, 1857, and where the cultivated area has increased from 11,385 to 25,523 acres and the demand from 48,010 to 55,361 Rupees. The rates of assessment in this locality under the old system ranged from 4 Rupees to 40 per acre, while under the new *regime* they vary from 1½ to 2½ Rupees. The Board go on to argue that the progressive increase apparent in the land revenue during the last few years, can only be attributed to an improved administration; the assessment being lightened, and irrigation and communications improved."

On 17th June, 1858, the Board of Revenue submitted the statements analysed by Government with further details. They supply the following table of the revenue of the entire Presidency:—

	Items.	Fusly, 1265.	Fusly, 1266.	Increase.	Decrease.
		Rs.	Rs.	Rs.	Rs.
Land Revenue.	Permanently settled, ...	49,76,039	49,74,827	.....	1,212
	Not permanently settled, ...	3,22,28,023	3,35,38,192	13,10,169	... ...
	Total Land Revenue, ...	3,72,04,062	3,85,13,019	13,08,957	... ...
Sundry sources of Revenue.	Abkarry, ...	22,32,662	25,24,383	2,91,721	... ...
	Moturpha, ...	10,97,486	10,79,111	.....	18,375
	Salt, ...	53,99,547	53,95,023	.....	4,524
	Sea Customs, ...	11,80,808	12,68,609	87,801	... ...
	Frontier Customs, ...	1,96,431	1,89,272	.....	7,159
	Stamps, ...	6,60,754	7,17,355	56,601	... ...
	Total Sundry sources, ...	1,07,67,688	1,11,73,753	4,06,065	... ...
Total Land and Sundry Revenues, ...		4,79,71,750	4,96,86,772	17,15,022	... ...
Extra Revenue (Sevoy Jumma)...		3,93,652	2,88,421	.....	1,05,231
Interest account, ...		27,373	38,195	10,822	... ...
	Grand Total, ...	4,83,92,775	5,00,13,388	16,20,613	... ...

They observe that a special enquiry is going on as to the effects of the Godavery and Kistnah anicuts, but meanwhile the following facts are patent. "In Rajahmundry the Godavery anicut has made a direct addition of Rupees 1,79,450 to the land revenue over 1265 in the following two items :—

		Rs.
1.	Increased cultivation of anicut channel lands to the extent of 18,715 acres, ...	1,02,247
2.	Increased collections on enam and zemindary lands supplied with water, ...	77,203
		1,79,450

"In Guntoor the revenue derived from the Kistnah channel lands rose from Rupees 78,154 to Rupees 1,18,304, giving an increase of Rupees 40,150, in the year under report. In Masulipatam the revenue derived from lands under anicut irrigation shews an increase of Rupees 29,765."

They further quote instances of the benefit to the revenue produced by the reduction of assessment. "In South Arcot the reduction of assessment on the lands in occupation exceeds 10 lacs of Rupees, and yet from an immediate spread of cultivation the settlement of the year under review amounts to 25,56,902, or Rupees 33,975 in excess of the highest standard ever before attained. In Guntoor some sandy pieces of ground near the sea had been cultivated with the chayroot-dye and garden products by the aid of rich manuring and hand irrigation from shallow wells scoped out by the ryots. But these lands were taxed as if irrigated, and burdened with an assessment varying from Rupees 4 to Rupees 40 per acre, and their cultivation was in consequence very limited. Under the sanction of Government this exorbitant taxation has been changed to the rates which are charged on dry land, varying from Rupees 1¼ to Rupees 2½ per acre, and the cultivation immediately doubled with a gain to the revenue of Rupees 7,351."

They add a table shewing the progressive increase of the land revenue under the systematic reductions of late years :—

Period.	Average Annual Revenue.	Highest and Lowest year.		Remarks.
Decennnial Leases.	Rs.	Fusly.	Rupees.	
1224 (1814) to 1230 (1820.)...	3,41,47,067	1225, 1230,	3,46,71,413 3,29,07,605	
Ryotwary.				
10 years from Fusly, 1231 to 1241*, ...	3,25,62,969	1234, 1237,	3,51,99,907 3,11,19,726	* In the early part of this period, reductions of assessment to the amount of 15 lacs of Rupees were made, *viz.* 11 lacs in the Ceded Districts and the rest in North Arcot, Canara, Coimbatore and Dindigul.
10 Fuslies, 1241 to 1251, ...	3,21,47,596	1249, 1242,	3,49,28,098 2,84,73,996	
10 ,, 1251 to 1261, ...	3,45,74,761	1257, 1252,	3,62,20,066 3,35,08,699	
1261, ...	3,59,79,479			The great drought.
1262, ...	3,63,91,499			
1263, ...	3,36,10,040			
1264, ...	3,50,61,654			
1265, ...	3,63,09 388			
1266, ...	3,78,47,002			

MADRAS LAND REVENUE REPORT.

1855-56.

On 31st May the Governor in Council reports that the rains of 1855-56 (Fusly, 1265) were below the average fall, and the wet crop therefore partially a failure, though the dry crop was abundant. The rain gauges however are carelessly kept. Prices ruled high, but nowhere appear to have caused individual distress, and it would appear that prices do not recede though more land has been taken into cultivation. During the year 12,50,000 acres of fresh land were brought under occupation representing a full assessment of 35 lakhs of rupees, and "this occupation of new land was specially observable in North and South Arcot and in Trichinopoly, where more particularly the recent reductions of assessment have been carried out. In these 3 districts upwards of 400,000 acres of fresh land, assessed at more than 12 lacs of Rupees, were taken up, and the general effect in South Arcot is stated to have been, that, in unirrigated land the cultivation rose from 25 to 35 per cent. of the cultivable area; that in irrigated land, there was also a considerable increase, while in two-crop land, the cultivated area was 25,315 acres in the year under report as compared with 13,223, the average prior to the reduction of assessment."

The total revenue of the year was Rs. 4,83,92,775 being higher than any receipt for 12 years; and of this sum Rs. 4,35,41,098 were collected within the Fusly. The land revenue amounted to Rs. 3,72,04,062 thus distributed:—

	Rupees.
"Land under Permanent Settlement, ..	49,76,039
Do. under Ryotwary, ...	3,12,29,587
Do. rented for 1 year, ...	2,02,012
Do. for more than do.	1,93,630
Do. under "Amany", ...	1,05,823
Quit rent of Enam and Shrotriem villages,	4,96,971
Total	3,72,04,062"

The cultivation of indigo was increasing, that of sugar-cane had slightly fallen off, and that of cotton had decreased 70,000 acres, chiefly in Bellary where grain was a more profitable cultivation. The remaining sources of revenue were:—

	Rupees.
"Abkary, ...	22,32,662
Moturpha, ...	10,97,486
Salt, ...	53,99,547
Sea Customs, ...	11,80,808
Sayer, ...	1,96,431
Stamps, ..., ...	6,60,754
	1,07,67,688"

The salt revenue has increased from the increase of sales.

"The total collections of current revenue and arrears, during Fusly, 1265, amounted to Rupees 4,78,58,561, and the total charges of management and collection, including those for the Police administration of the country, which under the present system cannot be distinguished, were Rupees 54,51,630, or about Rupees 11-6 per cent., the increase over the previous year being mainly due to the longer period of time included."

The total amount of balances outstanding of this and former years, is Rs. 10,00,671, of which 6,19,558 is recoverable. The report of the Board reviewed by the Governor in Council is dated 12th October, 1857, and contains in detail the facts summarised above, tables supporting them, and the reports in *extenso* of each Collector in Madras.

MADRAS COURT OF SMALL CAUSES.

1858.

The Report consists of returns to which no remarks are appended. The Court sat 276 days during which time 18,020 suits were instituted. Of these, 3,226 cases were English and 14,794 native. The average number of suits instituted daily was 65.289. The amount litigated was Rs. 3,33,282-4-8, and the fees received, out of which portions were returned to suitors who compromised their cases before hearing, amounted to Rs. 16,832-7-0. The net amount of fees carried to the credit of Government was Rs. 43,562-13-6, and the amount repaid to suitors, 8,964-10-0. The following is a comparative table of the cases heard and decided in 1856 and 1857:—

	1856.	1857.
Judgment for Plaintiffs, ...	7,855	8,247
,, Defendants,	771	770
Nonsuited and struck off;	865	846
Compromised, ...	6,996	7,623
Undecided, ...	59	75
Total	16,546	17,561

The total expense of the establishment per month, including the three Judges, was Rs. 6,274-8 or for the year Rs. 75,294. The commission and fees realised amounted to Rs. 43,562-13-6, shewing an increase over the previous year of Rs. 6,811-14-6. The unrecovered costs during the year amounted to Rs. 209-14.

Statement shewing the number of Suits instituted in the Madras Court of Small Causes, and the amount of Fees realized thereon, during the years 1851, 1852, 1853, 1854, 1855, 1856, 1857, *and* 1858, *together with the progressive increase and decrease in each year.*

Year.	Number of Causes instituted.	Increase of Causes in each year.	Decrease of Causes in each year.	Fees realized.			Increase of Fees in each year.			Decrease of Fees in each year.		
				Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
1851,	23,668	... ...	... ...	37,417	7	...	... ...	...	...	... ...	...	...
1852,	24,392	724	... ...	43,349	2	3	5,931	11	3	... ...	...	...
1853,	25,192	800	... ...	46,479	10	...	3,130	7	9	... ...	...	...
1854,	26,483	1,291	... ...	49,281	10	...	2,802	...	...	... ...	...	...
1855,	26,199	... ...	284	51,754	12	...	2,473	2	...	... ...	...	...
1856,	22,869	... ...	3,330	43,682	14	6	... ...	...	...	8,071	13	6
1857,	17,674	... ...	5,195	36,909	10	6	... ...	...	...	6,773	4	...
1858,	18,020	345	... ...	43,564	13	6	6,655	3	...	... ...	...	...

MADRAS COURT OF SMALL CAUSES,
The 31st day of January, 1859.

D. SHAW,
Clerk.

THE MADRAS FOREST DEPARTMENT.

On the 6th March, 1858, Dr. Cleghorn, the Conservator of Forests, forwarded to the Government "A Manual of Accounts" shewing the system "now adopted in the Forest Department and in the Botanical Garden, Ootacamund. Along with the financial statement is a summary of the Circulars and Regulations." The Manual was compiled by orders of Government.

Each of the assistants who have local superintendence over particular tracts of Forests, will submit an estimate of the probable sum required for working the forest during the succeeding year, before the 1st of April. "Whenever timber is sold to public officers, the value due on its account should be realized, either in cash or bills, precisely as if the sale had been to a private party."

Contracts.—"There are three species of contracts, into which it may be necessary to enter.

"1st. For felling and converting trees, and conveying them to the depot, or elsewhere, within a certain time.

"2nd. For conveying to the depot, or other place, seasoned or outlying timber.

"3rd. For the sale of standing trees, to be felled and removed, by the purchaser.

Supply of Timber for Indian Navy.—"The magnificent scantling of the Annamallay teak renders it peculiarly suitable for building of frigates, and it is therefore *almost entirely* reserved for the dockyard at Bombay. The timber when floated to Ponany, is examined by the Bombay Timber Agent, who selects whatever may be required for the dockyard."

The preservation of Poon trees for spars and of crooked timber for curves and knees is of great importance. Periodical auctions of timber in Canara and at the foot of the Annamallay slip will be held. The Bombay measures of timber are to be adopted.

Depot of Books and Implements.—"The Conservator proposes to form at the Head office, a small depot of books on the subject of Forestry, and of implements of arboriculture, from which Assistants and Overseers may be supplied in certain quantities annually." The duty of Assistants who travel through the Presidency is to explore the more densely-wooded tracts, and report on the nature and quality of the growing timber and vegetable products. The business of the Assistant in charge of the Conservator's office at Madras, is to prepare the accounts and conduct the current affairs of the office. The Superintendent of the Botanical Gardens at Ootacamund and at the Laul Bagh in Bangalore, and the Secretary of the Agri-Horticultural Society,

are to furnish monthly a cash account and a statement of plants distributed.

The account current of the Annamallay Forest of Coimbatore shews a balance in favor of Government of Rs. 13,528-9-7. The income from the sale of wood was Rs. 31,714-1-7, the expenditure 18,186-4-0." The following dimensions determine the classes of the planks, and the rates at which the axemen are paid for them.

								Rs.	As.
1st class	13 kolls	×	12 burrels	×	5 burrels		...	5	0
2nd do.	12 „	×	12 [redacted]	×	5 „		..	3	8
3rd do.	9 „	×	12 [redacted]	×	5 „		...	2	8

Many planks cut by the axemen do not come under the above classes, these are designated rejected planks. The former are passed planks fit for the Bombay dockyard, the best of the rejected planks are also transmitted to Ponany as they come under the 3rd and 4th classes of dockyard timber."

Details of the system of accounts between the axemen and the Superintendents is given. In an Appendix on the importance of crooked timber, it is stated that "nearly one-half of a vessel consists of the curves and ends, and the other half of straighter timber, therefore, as regards the supply for naval purposes, the production of crooks is as important as the production of planks, and higher prices are given." Directions are given to tie down the outside and exposed saplings for two years, to crook them. On 1st May, 1858, Dr. Cleghorn, gave in a report of his tour of inspection. He traversed Mysore, "and visited the depots at the mouths of nearly all the rivers on the Malabar Coast, examining a great part of the Western Ghauts he travelled through the most wooded portions along the chain of Ghauts, ascending and descending by the mountain passes from the Bombay Frontier down to Ponany. He afterwards went across the Annamallay Hills and round the slopes of the Neilgherry Hills. He also made a circuit of the Wynaad and twice visited the Conolly Plantations at Nellumboor, being altogether eight months absent from the Presidency."

The almost unbroken forest that covered the Western Ghauts from near the watershed to the most elevated ridges at the beginning of the century, has been stripped of its valuable hard woods by the axe of the coffee planter and of the coomree cultivator. The former is encouraged as he rescues the soil for legitimate purposes, but profuse waste has been prohibited in Mysore, the Bombay Collectorates and Canara. The destruction called coomree is caused by vagabond tribes, burning wood, with the view of raising from the ashes a crop of inferior grain.

The progress of the Railway and the requirements of the Indian Navy, the Telegraph and Public Works, have caused an urgent demand for timber. In the auction of timber at the foot of the Annamallay Hills, the average price of one Rupee per cubic foot was realized. "Along the whole length of the Malabar Coast from Goa to Cochin, there is now very little teak in a ripe state on Government land *below* the Ghauts, and there are only three localities *above* the Ghauts where is found teak in abundance and of good size, *viz.*

"1st. The Annamallay Forest in Coimbatore.

"2nd. Wynaad and Heggadevincottah, (partly in dispute between Mysore and Malabar).

"3rd. Goond Tableau, North Canara; near Dandellie."

The prospective supply of teak from the Annamallay forest will not exceed 15 years, and it is the only forest from which long planks suitable for a man-of-war can be procured. The Wynaad and Heggadevincottah forests will supply 40,000 cubic feet of teak annually. Both this and the former should be considered Reserved Forests. There is much plunder of the wood, and a particular survey of the whole should be made. The Canara teak is of much smaller scantling than that of Wynaad, but has the advantage of water carriage to the Coast. The Goond Forest is conserved by its inaccessible position. Its early working is of importance as it is much threatened by fire. "The question for consideration is, how to get out the wood whether by a rocky nullah with at least three small falls, or by making a road of 23 miles." An Engineer Officer should be deputed to visit and report. The plantations at Honore, Ankola and Sedasheegur, are poor specimens of teak. Up the Black River at Tarea Mullapoor is a plantation begun in 1854. Of 7,000 trees put down 2000 remain. The plantations on the banks of the Nellumboor River were commenced 15 years ago by the late Mr. Conolly, Collector of Malabar. They will be an important source of supply in future years. It is proposed to introduce to the Conolly system of plantations in the other districts.

Poon spars are so scarce as to be more valuable than teak. *Black wood* has risen much in price. Indents were received from the Madras and Bombay carriage manufactories for 5000 cubic feet. *Sappan*, an important dyewood, is much cultivated by the Moplahs, who plant a number of the seeds at the birth of a daughter. The trees require 14 or 15 years to reach maturity and then become her dowry. It grows without any care. It is damaged by being allowed to float in salt water. The *Sandal* wood tree received much attention in Mysore. Its spontaneous growth had increased to a considerable extent. A band of 78 smugglers, with the Sandal wood tied on

their backs, was captured near the Carcoor Pass. This seizure effectually stopped a long continued system of robbery on the Malabar frontier. "The '*Gutta Percha* tree of the Western Coast', so called, has been traced from Coorg to Trevandrum."

A large sample was transmitted to England for report as to its suitability for telegraphic and other purposes.

Catechu.—"The enhanced value of Cutt has caused an unusual destruction of the Acacia Catechu, which was properly restricted by Mr. J. D. Robinson to certain places in the North Canara jungles to prevent total destruction."

The *Kino* tree is prized at Dharwar not for its exudation but for its timber, which is extensively used in the Gin factory. The trees are notched for the extraction of Kino which is taken to the Coast where it meets with a ready market, and is exported in wooden boxes to Bombay.

Bamboo.—"Immense quantities of fine Bamboos are floated down the various rivers of the Western Coast. It is one of the riches of the Provinces. They are ordinarily 60 feet long and five inches in diameter near the root, these are readily purchased standing at 5 Rupees per 1000, and small ones at 3½ Rupees per 1000. Millions are annually cut in the forests, and taken away by water in rafts or by land in hackeries; from their great buoyancy they are much used for floating the heavier woods as (Mutte) the *Terminalia tomentosa* and (Biti) *Dalbergia Arborea*, and piles of them are lashed to the sides of the Pattimars going to Bombay. The larger ones are selected as outriggers for ferry boats, or studding sail booms for small craft. In addition to the vast export by sea, it is estimated that two lacs are taken from the Soopah talook eastward. The Malabar bamboo is much smaller than that of Pegu (Bambusa gigantea) which is 8 inches in diameter."

The floaters of timber are a distinct class of persons. The logs forming rafts are bound together by the stringy bark of various trees and stout branches passing through the drag-holes at right angles to the log. A small hut is made in the centre in which the floaters are sheltered at night. Though it is most desirable to substitute the saw for the axe, it is difficult to induce sawyers voluntarily to resort to the forests for employment. Meanwhile saw-pits must be confined to the coast depots, and their management left to private enterprise.

Forges for Charcoal.—"One of the difficult questions connected with forest conservancy is regarding the making of charcoal for iron-smelting. The forges in Canara are few, but in Dharwar, Belgaum, Bellary and Mysore there are many; and parties go into Nuggor or North Canara to make charcoal in large quantity. They make a hole 4 feet deep, 8 or 10 feet

broad, fill it with wood and cover it up. Having set fire to it ⅔ or ¾ is burnt, ⅓ or ¼ remains as charcoal. Not only is there great waste in the making of charcoal, but there is great waste when made, the charcoal being inferior. The blacksmiths insist upon the wood being either of bamboo or jambay (Inga Xylocarpa)." Europeans make good charcoal from common woods. Executive Engineers and Surveyors should inform the Forest Assistant of the cases of destruction of timber with which they meet. The depredation of noxious insects, especially the common coleoptera, which renders the rafter a mere honey-comb, is to be guarded against.

The supervision of the Government forests should not be carried out in such a way as "to interfere with the supply of agricultural implements to the *bonâ fide* ryot, or to obstruct the application of leaves and branches for alkaline material to fertilize his fields. In North Canara the ryots have their *coomuc* 200 yards above or 100 yards below Ghaut, enclosed pieces of land available for the use of their fields which is a very good arrangement when allowed to such estates as have been surveyed." The ryot is from old custom entitled to wood for his plough, &c. but the sowcar who wishes to make a cradle or palanqueen or requires wood for house-building must pay for the material.

Coffee.—"The successful cultivation of the coffee plant is extending remarkably, and applications for grants of forest land pour in upon the Revenue Authorities. In the Sisipara, Perambady and Sumpagee Passes, vast clearings are being made. In the Coonoor Ghaut six large plantations may be seen, and there are very large and numerous holdings, above 30, in the Wynaad, which from year to year will increase. The plant has succeeded admirably in Mysore, and there are patches of cultivation in Mádura and even in North Canara." But in granting forest land for legitimate cultivation, the fringe along the crest of mountain ridges should be preserved, as it is of special importance in a climate point of view. The immense tracts of virgin forests in the rich valleys of the Koondahs are eminently suited for coffee cultivation. Clearing for coffee cultivation should be allowed from about 2,500 to 4,500 feet, as this is the extreme range within which coffee planted on a large scale is found to thrive.

Tea.—There is a thriving tea plantation near Coonoor belonging to Henry Mann, Esq. "who has devoted much attention to it and has spared no expense. This is a very interesting experiment. The best varieties of the shrub were imported from China in 1854, the seeds having been given to Mr. Mann by Mr. Fortune on his return from the tea-growing districts.

There are now about 2,000 vigorous plants, and to ensure success it seems only necessary to procure a supply of workmen to teach the manipulation and separation of the leaves."

Forest Assistants have received instructions to keep a small arranged herbarium of flowers and fruit-bearing specimens of all forest trees and their varieties with notes. Of the 200 who applied for employment in the Forest Department, only three could be considered intelligent foresters. With the exception of a few Moplahs about Calicut, and Prubhoos at Mangalore, the contractors are rogues.

European Contractors.—"Two contracts have been entered into with Mr. Ross, Resident Railway Engineer, Coimbatore, whereby he has been permitted by his first contract to cut sleepers of certain specified woods in the forest near the foot of the Annamallay, paying quarterly seignorage at the rate of 3 Annas per sleeper, and by the second he was empowered to fell 2000 trees in the Walliar Jungle, at the rate of Rupee 1-8 per tree. Messrs. Brice and Co., an enterprising firm tendered for and obtained permission to fell 2,500 junglewood trees within the forests of Ekagolly and Codloogaddey in the Soopah Talook, North Canara, for supplying sleepers to the Bombay Railway Company, and agreed to pay Rupees 2,500 (half in advance) being at the rate of 1 Rupee per tree, and on exportation a further seignorage of 8 Annas per tree, and also such quantity of bamboos as they may require to float down the 2,500 trees at the rate of Rupees 5 per 1000 bamboos. This contract is to extend over a period of two years closing 31st December, 1859."

There is great difficulty in finding suitable Overseers. The essential qualifications desired are "1st. Robust health.—2nd. Rudimentary knowledge of Forestry.—3rd. Acquaintance with Accounts.—4th. Integrity of Character.—5th. Knowledge of Native Languages." The exposure, personal risk and low salary deter men from entering the Department. Dr. Cleghorn "having received from the Royal Gardens of Kew, a valuable set of named Indian plants being duplicates issued after the publication of the Flora Indica of Hooker and Thomson", proposes to arrange these materials in a consultable herbarium at the Presidency without any assistance from Government except to supply paper and cases. He forwards a specimen copy of a Manual of Indian Botany, prepared by order of the late Court of Directors.

"The expenditure on account of the Department generally has been as follows :—

	Rs.	As.	P.
Salary of the Conservator, the Assistant in charge of the office at the Presidency, and the establishment, ...	17,373	0	7
Salaries of travelling Assistants and their establishments, ...	6,847	10	4
Contingent charges, ...	3,868	14	4
	28,089	9	3

The Government, in their Minutes of Consultation, approve generally of the Report and its suggestions. With regard to the Botanical Manual they "would wish some uniform system to be adopted in the representation of Native terms in the Roman character."

MADRAS BUDGET OF PUBLIC WORKS.

1857-58.

Madras Records, No. LIV.

On the 12th March, 1857, Mr. H. Forbes, Acting Secretary to the Government of Fort St. George, submitted to the Government of India, Statements of Projects of Public Works proposed to be undertaken during 1857-58.

Statement No. 1 comprises 24 works involving an aggregate expenditure of Rs. 24,92,343: of these 13 are new projects, the others being proposed in former Budgets and still awaiting sanction. Owing to the fact of the Supreme Government, having restricted expenditure on Public Works during 1856-57, however, it is proposed to expend only Rs. 4,90,050. The following are the thirteen new projects:—

Irrigation Project.	Rupees.
No. 17.—Regulating dam across the Cauvery and Veerasholen rivers in Tanjore, ...	40,000
Trunk Lines.	
No. 12.—Bridge over the Palaur, Trunk Road, No. 8,	17,780
No. 16.—Improvement of Trunk Road, No. 9, ...	30,750
District Roads.	
No. 6.—Supplemental outlay required for the completion of the Ibrahimpatam and Hyderabad road, ...	14,170
No. 9.—Road from Venkataramanzepett to Royachoty in Cuddapah district, ...	41,300

District Roads.	Rupees.
No. 10.—Completion of Nundy Cunnama Pass between Kurnool and Cuddapáh, ...	50,000
No 11.—Constructing four bridges on the road from the Nundy Cunnama Ghaut, *via* Cummum to the Nellore Coast, ...	46,790
No. 14.—First class road between Chittoor and Gooriattum, ...	51,734
No. 18.—Four bridges on Paupanassem and Cabistalum road in Tanjore, ...	41,880
No. 19.—Road from Madura to Cooroomoorthee,	1,01,200
No. 21.—Improvement of road between Palamcottah and Travancore frontier, ...	25,310
Buildings.	
No. 22.—New Jail at Salem, ...	36,000
No. 23.—New General Post and Electric Telegraph Office with Exchange Hall, to be erected on the North Beach, Madras, ...	1,87,000

The Statement No. 2 exhibits the works sanctioned by the Government of India exceeding in estimated cost Rs. 25,000 each, and also works not exceeding that estimated cost and so sanctioned by the Madras Government. It contains 458 projects, the estimates for which amount in the aggregate to Rs. 1,12,12,020, of which sum Rs. 46,81,846 have already been expended, and Rs. 37,46,292 are required for the expenditure of 1857-58.

Combining the two Statements the total estimated cost of works other than repairs, for 1857-58, amounts to Rs. 1,37,05,263, " of which amount Rs. 46,81,846, it is computed, will have been expended by 30th April, 1857, and Rupees 42,36,312 is the sum which it is proposed to lay out in the next official year, leaving Rs. 47,87,075 for future years." The amount for repairs is estimated at Rs. 21,83,442, which added to Rs. 42,36,342, gives a grand total of Rs. 64,19,784, as the proposed expenditure for 1857-58.

An expenditure of Rs. 56,900 for improving and strengthening the Eastern embankments of the Kistnah, a distance of 33 miles from Yanamalacoodooroo to Mopadavy, was made in anticipation of sanction on account of the emergency of the case.

The following is an abstract of the synopsis of the Budget classified according to the established departmental headings :—

		New Works.	Repairs.	Total.
		Rs.	Rs.	Rs.
Public,..	Roads, &c. Communications, ...	23,04,280	7,18,058	30,23,238
	General, ...	95,425	25,311	1,20,736
	Political, ...	.....	21,000	21,000
	Revenue, General, ...	58,706	16,469	75,175
	Do. Irrigation, ...	12,47,226	12,77,316	25,24,542
	Judicial, ...	45,613	10,162	55,775
	Ecclesiastical, ...	2,710	9,162	11,872
	Educational, ...	.....	.....	.....
	Marine, ...	18,370	4,912	23,283
	Military, ...	4,64,012	1,00,151	5,64,163
	Total, ...	42,36,342	21,83,442	64,19,781

Statements composing the Hyderabad Budget are given. No. 1 refers to the new works to be undertaken, and No. 2, to the sanctioned unfinished works to be continued :—

	Rs.
"Statement, No. 1, ...	2,95,010
Do. „ 2, ...	1,43,308
Repairs, ...	4,500
Rupees, ...	4,42,848"

All the works embraced by Statements 1 and 2 "are auxiliary buildings to be attached to the Secunderabad barracks at Trimulgherry, and are therefore so many subordinate parts of the entire barrack project, which has been sanctioned by the Government of India at a total expense of 11,59,077 Rupees."

The charge of the military buildings within the range of the Hyderabad subsidiary force, was put under the immediate control of the Madras Government on 17th February, 1857. The Governor in Council accordingly suggests "that on the creation of the separate executive agency, the Executive Officer at its head should be placed under the control of the Chief Engineer at Madras, and that in all his duties he should look to that officer as his direct superior." An establishment for the Executive Officer, of Rs. 572 a month, is proposed. No Budget is given for the Mysore Division, but to avoid delay in the execution of the military buildings the Accountant General is directed to hold a sum of Rs. 1,07,000 at the disposal of the Executive Officer.

Then follows the Progress Report of Public Works for the official year 1856-57, given in by Col. C. E. Faber, Chief Engineer. "The total expenditure is shown to have been Rupees 68,74,202, of which Rupees 13,76,620 was on account of establishments and contingencies, leaving Rupees 54,97,582 as the real expenditure on Public Works. Of this latter sum Rupees 19,35,967 were laid out on repairs, the remainder Rupees 35,61,615 being the expenditure on new works, *viz.*

	Rs.
Irrigation, ...	8,46,751
Trunk and Secondary Roads, Ferries, Canals, Bridges, &c.	13,75,611
Buildings, ...	4,66,754
Total Civil,	26,89,116
Military Buildings, Accommodations for Troops, ...	8,72,499
Total Expenditure, ...	35,61,615"

In reply to Mr. Forbes, Col. W. E. Baker, Secretary to the Government of India on the 30th October, 1857, says "it would be superfluous to discuss in the usual detail, the several items of the Budget, many of which it is hoped, will again be brought forward under more favorable circumstances," owing to the impossibility of supplying funds for the construction of new works. The Governor General in Council noticed the completeness of the Budget with satisfaction, and directs the following system of classification to be adopted in future according to an order of the Court of Directors:—

CLASSIFICATION OF PUBLIC WORKS.

I. STATE.

A. MILITARY.
1. Fortifications.
2. Cantonments.
3. Accommodation for Troops.
4. Ordnance.
5. Commissariat.
6. Stud.
7. Staff.

B. NAVAL.

C. JUDICIAL.
1. Police.
2. Court Houses.
3. Jails.

D. REVENUE.
1. Land and Miscellaneous.
2. Customs.
3. Opium.
4. Salt.

E. ECCLESIASTICAL.
1. Churches and other Buildings.
2. Burial Grounds.

F. EDUCATIONAL.

G. GENERAL.
1. Government.
2. Public Works.
3. Post Office.
4. Mint.
5. Charitable Institutions.
6. Scientific Institutions.
7. Monuments and Antiquities.
8. Miscellaneous.

II. PUBLIC.

H. MUNICIPAL.
1. Town Buildings.
2. Markets.
3. Paving and Streets.
4. Lighting.
5. Water Supply.
6. Sewage.

I. MARINE.
1. Harbours and Navigation.
2. Light Houses.

J. INDUSTRIAL.
1. Mines.
2. Manufactures.

K. AGRICULTURAL.
1. Irrigation Canals.
2. Tanks.
3. Dykes.
4. Drainage.
5. Forests.

L. COMMUNICATIONS.
1. Metalled Roads.
2. Unmetalled Roads.
3. Bridges.
4. Boat-Bridges and Ferries.
5. Navigable Canals.
6. River Improvements.
7. Staging Bungalows and Serais.

M. RAILWAY.

N. ELECTRIC TELEGRAPH.

X. MILITARY CONTINGENCIES.

1. Furniture.
2. Conservancy and Service.

Statement showing the Financial results of certain Remunerative Works.

District.	Name of Work.	Amount Expended.	Average Revenue previous to the above Expenditure.	Average Revenue subsequent to the above Expenditure.	Increase.	Percentage.
Masulipatam and Guntoor, ..	Kistnah Annicut project, ...	13,53,438	77,255 66,883	1,56,612 92,106	79,357 25,223	
			1,44,138	2,48,718	1,04,580	7·7
Nellore, ...	River channel to Veeroor, &c. Villages, ...	1,751	5,420	6,123	703	40·1
	Supplying channel from the Tank of Goorevindapoody, ...	353	481	615	134	37·9
	Annicut across the Cundalairoo River, ...	3,159	4,955	6,543	1,588	49·8
	Nellore Tank new channel, ...	9,923	14,979	17,563	2,584	26
	Channel at Parlapully, &c.	2,085	15,004	19,100	4,096	196·4
	Constructing the Calingulah and sluice to Jummepolem Tank, ..	847	689	783	94	11·9
	Aqueduct constructed over the Jaffer Saib River channel for the irrigation of the fields of Goodepullypaud Village,... ...	406	435	545	110	27
North Arcot, ...	Village Tank at Moosoor, ...	2,007	658	943	285	14·2
	Annicut across the Ponnah or Poiney River, ...	30,635	20,836	25,762	4,926	16
	Building a sluice and repairing the bund of the Cheycaud Hissa Tank, ...	1,126	945	1,684	739	65·6

	Constructing Annicut and Head sluice to Aroombaukum channel,	315	1,931	2,599	668	6-7
	Do. Calingulah to Thayanoor Tank, ...	715	443	551	108	15-1
	Thellaur Chittairy, ...	552	802	974	172	31-1
	Constructing Calingulah to Goodaloor Tank, ...	618	377	436	59	9-5
	Cadalady Tank, ...	436	655	1,248	583	133-7
	Pooloor supply channel, ...	393	4,053	4,693	640	162-8
	Constructing Calingulah to Poorassy, ...	331	2,544	3,590	1,046	316
	Do. sluice to Oolunday, ...	72	106	123	17	23-6
	Do. do. to Valungaudoo Tank, ...	193	176	226	50	25-8
	Vothyoor Tank, ...	138	297	399	102	73-9
	Do. Sayanoor Tank, ...	182	819	1,019	200	109-8
	Constructing sluice to Pyoor Tank, ...	134	528	612	84	62
	Poonaverum spring channel, ...	129	729	897	168	130-2
	Codumbakum Tank sluice, ...	70	533	577	44	62-8
	Pullumbakum supply channel, ...	263	751	938	187	71-1
	Constructing Calingulah to Irrungul Hissa Tank, ...	181	2,536	3,009	473	261-3
	Palavakum Tank, Calingulah, ...	300	850	911	61	20-3
	Mamundoor Hiss Tank, ...	402	23,062	24,971	1,909	474-8
	Oakulpavoor, ...	288	4,118	5,003	885	37-2
	Anundal Chittairy, ...	60	1,011	1,509	498	8 3
	Curnavoor Tank, Calingulah, ...	164	698	972	274	167
	Thypaukum Chittairy, ...	38	305	422	117	307-2
	Mottookooppum Any tangle, ...	38	131	194	63	165-7
	Parapairy Tank sluice, ...	38	485	524	39	102-6
	Valeethangheepoorum Chittairy, ...	41	1,023	1,413	390	951-2
	Paradum Tank sluice, ...	94	195	208	13	13-8
	Timery Paudy supply Channel, ...	313	1,373	2,269	896	286-1
Madura, ...	Repairing land of Avaneapoorum Poodoocolum Tank, ...	155	173	332	159	102-6
	Do. do. of Nulloor Perea Cummoy, ...	91	945	1,105	160	175-8
	Do. do. of Mundacolum Perea Cummoy, ...	345	7,863	9,490	1,627	471-6
	Repairs to Perianai Dam across Vighy River, ...	212	18,110	18,726	616	290-5
	Do. to Coilputty Perea Cummoy, ...	455	333	510	177	38-9
	Repairing sluice of Vencatasamoodrum Cummoy, ...	150	1,396	1,407	11	7-3
	Do. do. of Velluncolum Cummoy, ...	199	227	294	67	33-6

Statement shewing the Financial results of certain Remunerative Works.

District.	Name of Work.	Amount expended.	Average Revenue previous to the above Expenditure.	Average Revenue subsequent to the above Expenditure.	Increase.	Percentage.
	Repairing bund of Govinthanelloor Tank, ...	70	226	230	4	5-7
	Do. do. of Athekariputty Caresacolum Tank, ...	218	213	230	17	7-8
	Do. do. of Attekolopedi Tank, ...	237	134	172	62	26-1
	Do. Annicut and Tank of Meenatcheepoorum, ...	972	699	883	184	18-9
	Do. of Pokunputty Tank bund, ...	234	267	335	68	29
	Do. of do. of Pooleakoundenputty Tank, ...	79	43	123	80	101-2
	Do. of do. of Kokalum Tank, ...	53	455	469	14	26-4
	Do. of Thirookanney do.	239	431	493	62	25-9
	Do. of Nuttakolum do.	77	86	106	20	25-9
	Do. of Nuvvagoody do.	62	78	115	37	59-6
	Do. of Chittanaindel do.	72	68	73	5	6-9
	Do. of Pervonkaryan do.	147	83	212	129	87-7
	Do. bund and sluice of Karoongalacoody Vyly Cummoy,	87	406	555	149	171-2
	Do. of Poodoocolum Tank, ...	69	620	734	114	165-2
	Do. sluice of Pottapanyoor Tank, ...	63	235	308	73	115-8
	Do. body of Thennumputty Annicut across Varattaur,	139	430	561	131	94-2
	Do. bund of Chittoor Munthcolum, ...	89	171	206	35	39-3
	Do. do. and constructing Revetment to Pulvey Vyapoory Tank and clearing bed of its supplying channel and repairing the Munpariee Dam at the latter place,	885	4,396	4,500	104	11-7

	Do. do. and sluice of Poodoocolum Tank,... ...	691	912	1,116	204	29·5
	Repairs to Kaliempootoor Peroonthelaur Annicut and sluice, in the channel taken off Poodoocolum Tank, ...	173	3,367	3,390	23	13·3
	Clearing bed of Poodoocolum Tank, ...	56	145	150	5	8·9
	Repairing bund of Athekaricolum Tank, ...	179	617	642	25	13·9
	Do. do. of Otoocolum, ...	66	345	355	10	15·1
	Do. do. and sluice of Chadiacolum Cummoy, ...	414	939	1,075	136	32·8
	Do. Gaingoowarputty Moongel Annicut across Munjelaur,	265	1,550	1,564	14	5·2
	Do. Caresacolum Annicut, ...	122	165	315	150	122·9
	Do. sluice of Athekaricolum Tank, ...	109	661	714	53	48·6
	Do. Butlagoontah Perianer Annicut across Munjelaur, ...	106	1,988	1,997	9	8·5
	Do. Vunnaurputty Annicut across Munjelaur, ...	77	678	745	67	87
	Do. bund of Kongercolum Tank, ...	184	274	316	42	31·3
E. C. Canal, ...	Cochrane's Canal, ...	6,228	0	26,366	0	0

COMMERCE AND SHIPPING OF RANGOON AND BASSEIN.

1857-58.

The total value of imports from ports not in Bengal into Rangoon for the official year was Rs. 24,75,339-6-2, and the gross amount of duty levied on them was Rs. 1,39,894-7-7. The total value of exports to ports not in Bengal was Rs. 36,96,900, and the amount of duty levied 1,10,427-2-4¾. The value of free imports (merchandise and treasure) for ports not in Bengal was Rs. 18,50,771-8-3, and the value of free exports was Rs. 9,04,191-11-10. The total number of ships that arrived at Rangoon was 297 with a tonnage of 1,39,331, while 317 with a tonnage of 1,28,540, departed.

The total value of imports into Bassein from ports not subject to the Bengal Presidency, was Rs. 52,384-8-8, and the duty levied on them Rs. 9,609-12-0. Of exports the value was Rs. 11,29,783-13-4 and the duty Rs. 37,825-9-1. The value of the free imports was Rs. 9,22,120 and of the free exports Rs. 1,00,062-7-0. 110 square-rigged and native craft with a tonnage of 42,485½ arrived, and 137 with a tonnage of 37,403 departed.

MADRAS CIVIL DISPENSARIES.

1857.

Madras Records, No. LV.

The Director General of the Medical Department reports to the Madras Government that, though the past season had been very favourable as regards health, epidemic diseases in the form of cholera, fever and small-pox had prevailed in several of the Collectorates. The increased export of grain had tended to keep up the prices of food, and hence there was much misery among the poor. Many who could not be brought to the Dispensary had medicines sent to them, and hence do not appear in the returns. "In all the Dispensaries (exclusive of the Civil institutions at the Presidency) the total number treated during the year has been 2,41,311, *viz.* 10,763 in-patients, and 2,30,548 out-patients; an increase of 30,745 over those of the preceding year. In addition to the numbers now given, it may be observed, that no fewer than 5,365 patients have been treated at the

Dispensary opened in Black Town by Mr. Paterson, Medical Missionary, attached to the Mission of the Free Church."

The total expenditure amounted to Rs. 75,292-10-6, the average cost for each patient being only 5 Annas and 3 Pice. People of all castes avail themselves of the aid of the Dispensaries, and the prejudices of females against European medicine are rapidly subsiding. "As in-patients, the proportion of females to males (Hindoos) is 52 per cent.; and amongst Mahomedans not less than 59."

The total number of in and out-patients was

Males, ...	1,60,879
Females, ...	60,855
	1,21,734

The percentage of females to males is thus 37.8. "The greatest number of admissions are under the heads fever, bowel complaints, venereal, abscess and ulcers, rheumatism, wounds and injuries; and the greatest number of deaths have resulted from bowel complaints, cholera, dropsies, and wounds and injuries; the ratio of deaths to treated has been greatest in cholera 59 per cent.; small-pox 32; and dropsies 24. Amongst the out-patients 1,681 cases of cholera have been treated with 292 deaths."

The Presidency was free from epidemic disease. The following are the General Hospital Returns:—

	1854-55.	1855-56.	1856-57.
"Treated, ...	1069	1185	1152
Died, ...	109	73	67"

In the Leper Hospital 127 patients were under treatment, of whom 47 were discharged greatly relieved, 17 died, and 63 remained. "In the cutaneous forms of the disease, much benefit resulted from arsenical preparations, but in the tubercular form, though the symptoms in many cases seem averted for a period, yet sooner or later they resume their course; daily ablution and good diet form a principal part of the curative means in all cases. In the seventeen fatal cases dysentery, diarrhœa, or dropsy, as usual, were the immediate causes of death."

The following are the returns of the Native Infirmary:—

	1854.	1855.	1856.	1857.
"Treated, ...	1247	1213	1083	833
Died, ...	267	284	217	202"

In the Idiot Asylum there were at the end of 1857, 57 men and 25 women; 24 patients were discharged cured. Into the Male Asylum there were 504 admissions from all diseases with

7 casualties and a daily average of 6 per cent. of sick. The average strength was 237 boys. The Female Asylum had been very healthy. "From an average strength of 213, the admissions into Hospital have been 252 or 118 per cent.—average daily sick 7 or 3 per cent.—not a single casualty occurred. Of the admissions 84, exactly a third part of the whole number, were from skin disease, 69 from fevers, and only 24 from ophthalmia."

In the Lunatic Asylum "at the close of the preceding year, 46 remained under treatment, 19 European and 27 Native; during the year 32 men were admitted, 9 European and 23 Native; 6 were discharged cured, 1 European and 5 Native; 14 transferred, 1 European (to England by ship *Trafalgar*) and 13 Native; died in hospital 4 Native. On the 31st December 50 remained under treatment, 25 European and 25 Native."

The Eye Infirmary treated 1,100 in-patients, 1,621 out-patients and of these by operation restored 50 to sight who had been wholly blind from cataract. In the Lying-in-Hospital 789 women were confined, of whom 9 were Europeans, 71 East Indians, 52 Hindoos, 10 Mahomedans, and 647 Pariahs. Among these there were 11 deaths. Of the class of female pupils attached to the Hospital four obtained certificates of qualification as midwives.

Of the 789 cases "688 were cases of natural labor, 50 of difficult, 23 of preternatural, 28 of complex and 11 of complex and preternatural labor. These 789 women produced 796 children, 11 women having given birth to twins, two dying undelivered, and two producing monsters not entered as children. Of the 796 children born, 436 were males, and 360 females, or a proportion of 1·2 males to one female, or 54·70 per cent. of males. Of the 436 males 387 were born alive, and 49 still, or 11·2 per cent. and of the 360 females, 330 were alive and 30 still or 8·6 per cent."

The following is a general abstract of the diseases and number of patients:—

IN-PATIENTS.	DISEASES.																Total.	Average daily number of sick for the year.
	Fevers.	Eruptive Fevers.	Diseases of the Lungs.	Diseases of the Liver.	Diseases of the Stomach and Bowels.	Diseases of the Brain.	Epidemic Cholera.	Dropsies.	Rheumatic Affections.	Venereal Affections and diseases of the Genital Organs.	Abscesses and Ulcers.	Wounds and Injuries.	Diseases of the Eye.	Diseases of the Skin.	Other Diseases.			
Remd. 31st Dec. 1856, ...	36	2	21	1	35	22	1	26	83	123	132	40	5	37	181	748		
Admitted since, ...	954	221	265	49	908	218	221	449	966	1,386	1,325	798	138	416	1,702	10,015		
Discharged, ...	906	137	234	40	754	202	89	335	952	1,406	1,321	729	136	403	1,619	9,263		
Died, ...	40	73	45	7	151	14	131	116	22	23	39	59	2	15	111	848		752
Remg. 31st Dec. 1857, ...	44	13	10	3	38	24	2	23	75	80	97	50	5	35	153	652		
Proportion of Deaths to Sick treated per cent.	4·04	32·7	15·5	14·0	16·01	5·8	59·009	24·4	2·09	1·4	2·6	7·01	1·3	3·3	5·8	7·8		

OUT-PATIENTS.	DISEASES.																
	Fevers.	Eruptive Fevers.	Diseases of the Lungs.	Diseases of the Liver.	Diseases of the Stomach and Bowels.	Diseases of the Brain.	Epidemic Cholera.	Dropsies.	Rheumatic Affections.	Venereal Affections and diseases of the Genital Organs.	Abscesses and Ulcers.	Wounds and Injuries.	Diseases of the Eye.	Diseases of the Skin.	Other Diseases.	TOTAL.	Average daily number of sick for the year.
Remd. 31st Dec. 1856, ...	245	4	116	5	391	46	73	19	203	156	399	157	35	198	284	2,331	3,264
Admitted since, ...	20,994	145	6,614	248	73,705	3,708	1,608	872	15,447	6,860	37,721	11,287	7,274	12,133	18,757	2,17,373	
Discharged, ...	20,886	144	6,579	244	73,563	3,686	1,381	854	15,361	6,808	37,473	11,285	7,256	12,138	18,709	2,16,367	
Died, ...	11	5	13	1	34	6	292	11	1	2	15	6	1	0	33	431	
Remg. 31st Dec. 1857, ...	138	0	138	8	499	62	8	26	288	206	632	153	52	193	299	2,906	
Proportion of Deaths to Sick treated per cent.	0·05	3·3	0·1	0·3	0·04	0·1	17·3	1·2	0·006	0·02	0·03	0·05	0·01	0	0·1	0·1	

An Appendix follows which contains the detailed reports of the Dispensary of each Collectorate by its Surgeon. The Government Minutes of Consultation reiterate the statements of the Director General's Report.

THE ANDAMAN ISLANDS AND BARREN ISLAND.

Indian Records, No. XXV.

On the 20th November, 1857, the Government of India appointed a committee, "composed of Dr. F. J. Mouat, the Inspector of Jails in the Lower Provinces, Assistant Surgeon G. R. Playfair, M. D. and Lieutenant J. A. Heathcote of the Indian Navy, to examine the Andaman group of Islands, with a view to the selection of a site for the establishment of a Penal Settlement for the reception, in the first instance, of mutineers, deserters, and rebels, sentenced to imprisonment in banishment, and eventually for the reception of all convicts under sentence of transportation whom, for any reason, it may not be thought expedient to send to the Straits Settlements or to the Tenasserim Provinces."

They were instructed that "the first requisites of such a settlement are a secure and accessible harbour, abundance of wood and water, a healthy situation for a jail and convict lines, and considerable extent of country in the vicinity fit for clearance and cultivation." The jail was to be located on an islet. Dr. Mouat was to be President of the Committee, Dr. Playfair to undertake the medical and scientific duties of the expedition, and Lieutenant Heathcote to survey the coasts and harbours. A photographer and a small guard of Europeans were to accompany them.

The Report of the Committee is introduced by Dr. Mouat in a Preface in which he states the sum of our knowledge of the Andamans. They are a collection of volcanic islands, surrounded by coral reefs, covered with dense tropical vegetation, and deficient in animal life. Their savage inhabitants are at the very bottom of the scale of civilisation: they are destitute of clothing, ignorant af agriculture and live in the rudest form of habitations, their only care is the supply of their daily food. Though most hostile to strangers, they are not cannibals; they dread contact with every other race; they have no government nor religion. Their origin is a mystery. The earliest authentic account of them is that of the two Mahomedan travellers given in Pemberton's General Collection of Voyages and Travels.

Capt. Hamilton describes them in his Account of the East Indies. But the writings of Blair, a chapter in Col. Symes' Embassy to Ava, and Colebrooke's Journal, are the earliest reliable authorities. The vocabulary of the language of the savages published by the last, is quite different from that of the people now. There is an intelligent account of the Andamans in the *Calcutta Monthly Register for November*, 1790. The inhabitants are dwarf Negrilloes, stout and robust: they are intensely black, they possess "most of the physical characters of the true Negro, with the exception of the projection of the heel.

"The individual captured at Interview Island was singularly quiet and docile, imitated readily, the acts and gestures of those by whom he was surrounded, and never from first to last exhibited the smallest indication of ferocity." The total height of this man was 4 feet 9½ inches. He was 25 years of age. His language did not correspond with any known written or spoken language which could be brought to bear upon him. He sickened too rapidly to allow of time to prepare a vocabulary of his words. His imitative powers were great. He shewed great affection for young infants. He was unacquainted with the use of tobacco. He had the short, quick, chuckling, joyous laugh of the Negro races. He was handy in making nets, fastening on the iron barbs of arrows, and in the use of his native adze. He always seemed anxious to do something. He was caught on the occasion of the Committee landing in a cutter on Interview Island. They were then attacked by the savages, but when fired upon, these fled in their canoes. "One of the natives, when in the water, seized a strap thrown to him from the second cutter, and was taken on board. The Committee deliberated anxiously as to the disposal of this man, whether to release, or to carry him to Calcutta. They ultimately decided on the latter course as the one required by the interests of humanity, although attended with hardship to the individual, until he can be instructed sufficiently to know the reasons which led to his removal from his country and his kindred."

On being brought to Calcutta "he was first attacked with cholerine, which was treated sucessfully; and then with bronchitis, which threatened to merge in the low form of typhoid inflammation of the lungs, that destroys Sonthals and all other wild tribes so rapidly and certainly in the Jails of the Lower Provinces." Government accordingly directed that he should be sent back to Interview Island, "abundantly supplied with useful articles of peace, such as carpenter's tools, knives, cotton cloth, thread, cords, axes, metal-pots and pans, as well as with beads, looking-glasses and such like objects of savage finery."

The only commercial purpose for which the island has hitherto been visited was for the *beche de mer* or holothuria, abundant on every reef, and for the edible nests which are found in the caves. The inhabitants have no manufactured articles of any sort save bows, arrows, canoes, nets, paddles, twisted cord, nails beaten into thin knife blades, and an adze. The arrows are formidable but not poisoned. They seem to obey a local Chief in each village. They are a bold, handy, active and crafty race and susceptible under the influence of civilisation of becoming an intelligent and industrious population. The *Briton* and *Runnymede*, with portions of H. M's. 50th and 80th Regiments on board, was wrecked on the Andamans a few years ago, but no particulars of that or any other wreck are procurable. "Since the re-occupation of Port Blair as a convict settlement, Ross Island, Chatham Island, and a portion of Viper Island, have been cleared and occupied. Great sickness, as might have been expected, has occurred among the convicts and all who lived on the newly-cleared grounds. The diseases are apparently identical in character, intensity and mortality, with those which followed the early occupation of Arracan. In the Terai of Bengal and Behar, newly-cleared lands are not deemed habitable for a couple of years after they have been prepared for cultivation. The inhabitants of such places invariably sleep on machauns raised high above the ground." The land at Port Blair is singularly fertile, and water is tolerably abundant. The savages have not fraternized with the sepoy convicts. The expedition was not marred by a single act of wanton cruelty..

On the 1st January, 1858, the Andaman Committee gave in their report to Government. They "embarked on the *Semiramis* on Monday, the 23rd of November, and reached Moulmein on the afternoon of Tuesday, the 1st of December, 1857." An officer and twenty European seamen of the Indian Navy were placed at their disposal, and twelve Burmese convicts to enable them to penetrate the dense jungle. They were also furnished with a boring instrument. They left Moulmein in the *Pluto* and reached Port Cornwallis on the 11th of December. This place was abandoned as a settlement in 1796. It was ill-selected. Two-thirds of its shore are fringed with a dense belt of mangrove, and the prevailing winds blow over the swamp surrounding the island. They then steered to Craggy Island, but found it impracticable to mount the Saddle Hill, the highest point of the islands. They found Sound Island, the next point on the coast eligible for a settlement, deficient in water and in timber fit for building purposes. A pestilential Sunderbun was found to exist between the North and Middle Andaman. The islands of the Archipelago on the East coast are utter-

ly ineligible. They then visited Barren Island, ascended the cone, and saw the crater which is still smouldering. It contains little sulphur and that too inaccessible to be worked with advantage. They then anchored abreast of Chatham Island in Old Harbour, the site of Blair's first settlement. His survey made in 1789 was found to be most useful and trustworthy. Nearly every trace of the original settlement has been entirely effaced. There are water, sandstone, bamboo, cane and large forest trees. The coral reefs will afford lime, and good limestone is available about a day's sail from Old Harbour. The soil is fertile. The rocks abound in oysters and other shell-fish, and the harbour will prove a rich fishery. The belt of mangrove on the East is small and could be easily removed. Mangrove Bay if embanked would afford good rice-land. "Ross Island at the entrance of the harbour, is ¾ of a mile long by ½ mile at its broadest part, is low on the western side, gradually rising to an elevation of about 60 feet on its eastern shore, the rock being sandstone. It acts as a breakwater against the North-east monsoon, and appears from the Hospital having been placed there formerly, to have been used as a sanitarium, for which purpose it seems is well adapted. It is bounded by smooth rocks on its sea face, and contains large forest trees, with vigorous and not very rank under vegetation."

On the whole "so far as ordinary experience can be accepted as a safe guide, Old Harbour seems to afford fair promise of proving as healthy as any locality similarly situated in a tropical region. Its means of drainage are ample and most efficient; the removal of all *effete* matter beyond the reach of causing mischief will be easy; and any possible existent tracts of marsh land, do not lie in the direction of the prevailing winds." Economic and useful plants will certainly flourish there and probably many tropical fruits could be naturalized and grasses grown for pasturage.

From Old Harbour the Committee steered south to Rutland Island, and one of the Cinque Islands in its vicinity. "The former is a fine extensive tract of land, hilly at its northern end, well-wooded, and flatter in the rest of its extent. It is apparently well supplied with water, must be healthy from its position, and the character of its vegetation renders it probable that it possesses a fertile soil." But it is inferior in all respects to Old Harbour. "The second of the Cinque Islands would form an excellent isolated station for very refractory convicts, who needed entire separation. It is three miles in length by one in breadth at the broadest part, is unusually well supplied with water, and is separated sufficiently from all other land, to render escape from it next to impossible. It is fertile in some parts,

and would most likely prove very healthy, but scarcely contains a sufficiency of land fit for cultivation to maintain a settlement." It is 24 miles distant from Old Harbour. The Labyrinth Isles are evidently unsuitable for convict settlements.

On proceeding northward along the western coast they found a spacious harbour to the South-west of Old Harbour and within two miles of its western extremity. A short road would here connect the two shores, and were the intermediate land cleared, a healthy sea breeze could be obtained during both monsoons. But access to it is difficult. On the map it is called Port Mouat. Port Campbell to the north is also difficult of entrance or exit. Passing Middle Strait between the South and Middle Andaman Islands, they went to Interview Island. It is a fine island, has a large and secure harbour, is well-watered, more thickly peopled than the rest of the coast, is healthy, but still inferior to Old Harbour. "Landfall Island and the Cocos were not explored. The former only was looked at, but as both of them are too directly in the track of commerce, and are deficient in harbours, they are evidently not suited for convict settlements. In conclusion the Committee are of opinion that Old Harbour is the only place that possesses the greater number of the requisites for a penal settlement, and they accordingly recommend its occupation for that purpose, in preference to any other of the localities visited and examined." They record their admiration of Lieutenant Blair as a hydrographer and recommend that the name of Old Harbour be changed to Port Blair in his honour.

The Committee paid "more than ordinary attention to all measures calculated to open an amicable intercourse with the natives, and to throw light upon their habits and customs. From first to last they rejected every attempt at conciliation, and either avoided, or forcibly opposed, all attempts to hold communion with them. Traces of them were found on Chatham Island and the shores of Port Cornwallis generally, but no native was seen there. The first contact with them occurred at Craggy Island." A large party of them were there surprised fishing. On the Committee landing most of them fled, but some glass beads were left in their canoe, while 10 or 12 shewed every sign of hostility. Our party shouted to them the word *padoo* which Colebrooke gives as meaning *friend*, but all in vain. As the inhabitants of Interview Island are generally represented as more sociable, another attempt at intercourse was made there. The Committee and some of the steamer's crew left the *Pluto* in two cutters, carefully concealing all arms. The savages discharged flights of arrows at them from their canoes. As the aggression became serious, they were fired on and three shot dead, upon which the rest fled. It was then

that "John Andaman," the savage already described, was taken on board.

From the identity of habits and customs, it is evident that the same tribe occupies all the islands. On exhausting one spot in fishing, they remove to another. They do not cultivate the soil. Their huts are open in all sides and consist of four posts. They are thatched with palm leaves which overlap each other. "In many of the huts bunches of the skulls of fish, pigs, and tortoises were hung up. The skulls were variously marked of red color. Near all the huts were found an abundance of empty shells. The canoes are scooped out of the trunks of trees and vary considerably in size. The process must be extremely tedious, as it is performed by a dwarf adze with a wooden head, in which a small, sharp, semicircular blade of iron beaten out, is placed. This is sharpened on a stone, which was invariably found with it. The canoes are propelled by bamboo poles and paddles, the latter consisting of a handle about three feet and a half long, with a small blade, either pointed or circular at the end. Many of them were ornamented by cross lines of red paint. The canoes which put to sea are armed with an outrigger, very similar to that used by the Cingalese. In the canoes were found small hand-nets, bows, and arrows, nets containing empty shells, old nails, bits of stone, and similar rubbish. One large strong net, with immense meshes, and singular floats, was taken. It appears to be used for catching turtle. They manufacture a tough cord from a strong fibrous bark, and scoop out blocks of wood for vessels to contain fresh water. The usual drinking cup is an empty nautilus shell. They have small wicker baskets, which are fastened to the waist when they are fishing, by a coil of strong coarse round cord, of which three or four folds were seen round their bodies. To the end is attached a piece of iron beaten into the form of a knife blade, probably to open shells. The only vegetable food found in their canoes or habitations was the fruit of the mangrove, a large leguminous bean, and some wild spinach. The former is sliced in shreds, and placed to soak in fresh water in a small, closely woven net." They tattoo their bodies in a savage way. "All hair is removed from their scalps and bodies, with the exception of the upper lip of the men, where a scanty amount of stunted woolly hair was seen.

"The island called the Great Andaman is about 125 miles long, with a breadth varying from five to sixteen miles. Its length runs North and South in the 93° of East Longitude and between the 11th and 14th parallels of North Latitude. Strictly the Great Andaman is formed by three islands distin-

guished as North, Middle, and South." The watershed is chiefly towards the West. The height of the Saddle Mountain, the highest point, is 2,400 feet. The only mammal whose existence was ascertained was the pig. There are several birds. The whole of the shores are skirted by coral reefs, which form dangers to a far greater distance from the land on the West side than on the East. None of the party suffered from sickness.

The Governor General in Council approves of the selection of the Old Harbour as a penal settlement, instructs the Superintendent of Convicts at Moulmein to proceed there to clear a site, expresses approval of "the business-like and practical shape" of the Report, directs the new Harbour to be called Port Mouat, and approves of the capture of the Andamaner. The Court of Directors on the 18th May, 1858, reviewed the Committee's report, which "is extremely curious and interesting." Of the Committee they say, "they evinced great intelligence and sound discretion in the prosecution of their investigations, and, in their dealings with the savage people of the island, a laudable humanity and forbearance."

The Appendix contains a letter from the Secretary to the Government of India, to the Government of Bengal, on a despatch of the Court, dated 29th August, 1855, which comments on the outrages committed by the Andamaners on ship-wrecked seamen. Captain Hopkinson, Commissioner of Arracan, in a report on the subject called for by the Government of Bengal, speaks of the magnificent situation of the Andaman Islands, their proximity to the great seats of trade in the Bay of Bengal, and the policy of having a harbour on their coasts sufficiently large to afford shelter to a fleet, an attempt at which was made by the Board of Administration in 1788. The occupation of the islands by the expedition under Lieutenant Blair lasted for six years and a half, or from October, 1789 to the middle of 1796. He recommends that they be reoccupied with a view to a penal settlement. Nutmeg might be cultivated on their higher tracts, and fibrous materials are likely procurable. "Any project for the re-occupation of the Andamans should also comprehend arrangement for exercising from them a surveillance over the neighbouring group of the Nicobars. Those islands have acquired a horrid notoriety of late years for the murderous piracies committed by their inhabitants."

On the 19th March, 1856, Col. Sir A. Bogle, Commissioner of the Tenasserim and Martaban Provinces, reported the murder by the Andamaners of eight Chinese traders.

On the 1st of October, 1856, the Court of Directors, after receiving the minutes of the Governor General and Council on the whole subject, direct that steps be taken to explore the An-

daman and also the Nicobar Islands. The King of Denmark abandoned all right to the Nicobars on account of their insalubrity in 1847. The Court ask for information to enable them "to form an opinion respecting the expediency or inexpediency of taking formal possession of the islands."

Appendix No. 2 contains a precis of information regarding the Andaman, Nicobar and Coco Islands, prepared in the Foreign Office, from official documents, Col. Symes' "Embassy to Ava," Mr J. B. Quigley's Account of his Visit to Interview Island, "Buseh's Nicobar Journal" (unpublished) kept on board the Danish schooner *L'Espieglo* in 1845, and sundry Gazetteers.

The Great Andaman is 140 miles long; its greatest breadth is 20 miles, its surface about 2,800 square miles. While cocoanut-trees are seldom seen on the Andamans they are abundant on the Nicobars 72 miles to the south, and on the Cocos 30 or 40 miles to the north. "The following are the names of the trees which have been found on this group; but there may be many others which have not been seen, owing to the difficulty of penetrating very far into the forests:—The banyan; the common almond; the wood-oil tree, which grows to a great height; the penaigre, 'well adapted for the knees of ships;' the iron tree, of 'stupendous size,' the timber of which almost bids defiance to the axe; the red wood, which 'makes beautiful furniture, little inferior to fine mahogany,' the ever-green beech (*fagus betuloides;*) the lance wood tree; a species of ebony; the mountain-jack (*Artocarpus echinatus*); the 'poon,' 'soondry,' 'chingry,' and 'beady;' the dammer-tree; the cotton tree; the Alexandrian laurel; the acacia; catechu; the cocoanut; poplars; aloes; mango; and a tree resembling the satin-wood. There is also a tree of enormous size, 'one having been found to measure 30 feet in circumference,' producing a very rich dye. Mr. Quigley says that he saw on the beach of Interview Island, a number of 'fine fir trees,' at regular distances. Among the other vegetable productions, may be named mangroves (*rhizophora*), pumpkins, bamboos, and ground-rattans.

"Hogs, rats, monkeys, and ichneumons appear to be the only mammalia which have been seen on Great Andaman. On Interview Island, however, Mr. Quigley says that there are tigers, leopards, a species of white monkey, wild cats, wild dogs, a species of black pig with short legs, and several kinds of squirrels. A species of whale also resorts to these islands.

"According to Colonel Symes, birds are not numerous in Great Andaman. Doves, paroquets, and the Indian crow are the most common. Hawks are sometimes 'temporary visitors.' Lieuto-

nant Blair saw several caves occupied by vast numbers of the small swallows (*hirundo esculenta* and *h. fuciphaga,)* which build the edible nests so highly prized by the Chinese as a delicacy and restorative. Mr. Quigley gives the following longer list of birds in his description of Interview Island:—wild fowl, ground doves, large green pigeons, teals, plovers, curlews, bulbuls, large and small parrots, mynahs, the red-headed wood-pecker, honey-suckers, a large brown hawk, a white-headed fish hawk, the king-crow, the tailor-bird, cranes, white herons, crow-pheasants, black-birds, and thrushes. On the Western side, parrots and humming-birds, are said to be very numerous. The reptiles are snakes (several species), lizards, iguanas, tortoises, and turtles."

Some suppose that the Andamanese were the anthropophagi of the ancients. Lieutenant Blair traced their hostility to all strangers to the fact that the Malays had been in the habit of kidnapping them and selling them into slavery. Their religion consists of adoration of the sun and moon, the genii of the woods, the spirit of the storms. Capt. Stokoe estimates their numbers at not exceeding 2,000 or 2,500 souls, later accounts make them 10,000.

The Coco Isles are "two little isles a few miles distant from the North-east point of Great Andaman. The larger of them is six miles long and two broad, the smaller two miles and a half long and nearly a mile broad. They are sheltered by the Andamans from the heavy South-west swell of the Bay of Bengal, and afford facilities for careening vessels in safety; of both the islands it may be said, that they have a fine sandy beach all round, one or two commodious bays, and good anchorage, and that at the Southern extremity of each there is a reef of rocks extending several miles into the sea. Both islands also are uninhabited. In April, 1849, an attempt was made to form a small settlement at Great Coco. Three Europeans, one East Indian, and eight Burmese proceeded thither from Moulmein; but choosing a very unhealthy site, close to an accumulation of decayed vegetable matter, seven of the number died, and the rest abandoned the island. The Burmese, however, who visit it every year, for the purpose of collecting and drying cocoanuts, do not find it so unhealthy."

The soil is fertile and produces, besides cocoanuts, "the wood-oil tree; the wild palm (*phœnix paludris*); the fig; the pigeon pea, or doll; the common almond; the *randia dumatorum*, the bark of which is used for intoxicating fish; the mountain jack; the heart apple; the mango; the mangosteen; the betelnut; the sweet krout; the rattan; the tree from which the Burmese obtain the materials for making torch-lights; 'a

species of timber for spars;' and 'a variety of other descriptions of trees, which are capable of being applied to ship-building.' In the patches cultivated by the Burmese and by the late emigrants, were seen the plantain, the pine-apple, the silk-cotton tree, pumpkins, chillies, garlic, onions, the tamarind, the orange, &c. Grass grows very luxuriantly in both the islands, and affords nourishing food to numerous large guanas, and shelter to flocks of teals.

"The only mammalia are a few wild boars, black pigs, and very large cats. The birds are teals; wild fowl; plovers; ground doves, *(Columba Indica)*; crow-pheasants *(Centropus Phillipensis)*: white and green pigeons; curlews; and quails and partridges in abundance. 'A number of domestic fowls, having been set adrift in Great Coco, are now running wild about the jungle. The shores swarm with large fish, prawns, crabs, oysters, turtles, &c. There are snakes of many kinds in Little Coco; among them the Cobra Capella,' and a small viper of a very venomous description. There are also lizards, guanas, and blood-suckers. In the same swampy island, sand-flies and musquitoes, as might be expected, are 'exceedingly troublesome.' The musquitoes are of a large and venomous kind. Fresh water is easily obtained at all seasons." Honey and wax are to be found in small quantities.

The *Nicobar Isles* "are situated between 6° 50′ and 9° 20′ North latitude, and 92° 50′ and 94° 10′ East longitude. The group consists of nine larger islands and some smaller ones. The two most southern are called respectively Great and Little Nicobar. The former is more than 20 miles long and 8 across in the widest part. It has a fine bay on the North-east side; another to the South, environed by hills and rocks and lofty trees; and a third on the South-east side, round which the surf breaks violently, but which affords good protection against the North-east monsoon. Little Nicobar is not half so large." It has an advantageous bay on the North-west side and also at Terressa. "The Danes formed a settlement on this group in 1756, but abandoned it 12 years after. In 1833, Her Majesty's ship *Magicienne* touched at one of the islands, and found there a Danish Governor, Mr. Rosen (with 50 or 60 sepoys), who had instructions to carry on a trade in betel-nuts and edible-nests, to the exclusion of other nations. In 1845, with the concurrence of the Danish Government, Mr. D. C. Mackey, of the firm of Messrs. Mackey and Company, of Calcutta, the Consul for Denmark, despatched an expedition to the Nicobars, under Mr. Busch and Captain Lewis (the present Master Attendant at Rangoon), who hoisted the Danish flag at Pulo Condul and Great Nicobar. They found the ruins of the last

Danish settlement on the island of Camorta. 'There was not a vestige of plantation or of cultivation, though the hills and valleys all round are entirely free from jungle.' 'We regretted much,' says Captain Lewis, 'that we could never obtain any clear account of the settlement, nor of the misfortunes and obstacles it must have met with. The islanders spoke with affection of the settlers, and also of the Government."'

In 1846, the Danish Government abandoned all right to the islands in consequence of their unhealthiness. "At the southern harbour of Great Nicobar, the nearest hill, on being measured, was found to be 1,575 feet above the level of the sea. There were others in the interior, of a greater height. In Little Nicobar, some of the hills are supposed to be about 1,000 or 1,200 feet above the sea-level. The island of Bompoka rises abruptly from the beach to the height of 750 feet. Pulo Cobra is a small high island, bristling with cocoanut and betel-nut trees."

Something like Cannel coal is found on them. A great traffic is carried on with some of them in cocoanuts, betel-nuts, pigs, poultry and yams, which are bartered for European goods and also gold for Rupees and Spanish Dollars. Wild sugar-cane and mangosteens, pine-apples and limes are found. "The only mammalia of these islands seem to be monkeys and pigs. Among the birds are a species of 'hurrial' pigeon, the white-cliff pigeon, 'the well-known-splendid-ground pigeon of the Nicobars,' kingfishers, the blue-tailed bee-eater, the swallow of the edible nests, hill mynahs, the oriole or mango bird, the Malayan species of honey-sucker, &c. There is no want of fresh water."

The natives are piratical like the Malays. "At Terressa, Mr. Busch found two French Missionaries, who gave him an account of the plundering and scuttling of the following vessels:—

"1. In 1839, at Nancowry, the whaling-vessel *Pilot*, H. M. S. *Wanderer* was in 1840, despatched 'to avenge this affair.' She fired some shots, and burned a few huts; but the natives did not care for such a demonstration. 'The only punishment to affect them, would be the destruction of their cocoanut trees.'

"2. In 1833, at Nancowry, a craft of two masts, commanded by an Eurasian.

"3. In 1814, at Nancowry, a vessel of 100 tons, commanded by Captain Caw.

"4. In August, 1844, at Terressa, the schooner *Mary*, commanded by Signor Ignacio Ventura, 150 tons.

"The crews of the above vessels were all murdered. It is supposed that the Malays who collect edible nests, 'instigated one of the massacres.' 'Purely native craft, however, have

never been known to be attacked; probably because the temptation is not sufficient.'

"The people of Car Nicobar, who partake somewhat of the Burmese physiognomy and complexion, have the character amongst the English' skippers and other traders, of great honesty and promptitude in their transactions; that they strictly fulfil their contracts to supply cocoanuts. They are perfectly civilized, compared with the Andamanese. They do not go about in a state of nudity; they speak a little English and Portuguese; their boats and huts are constructed with great ingenuity; and they smoke and also use bètel, both the nut and the leaf. They are averse to European residents; consequently, the French Missionaries alluded to at Car Nicobar, were obliged to remove to Terressa, carrying with them materials for building a house. The natives of the latter island, however, being 'opposed to all innovations,' forced them 'to abandon their schemes of improvement,' and kept them almost as prisoners, in a house thickly surrounded with jungle, where one of them died."

The Nicobarians on the coasts are probably of Malay extraction. They differ from the race in the interior of the Great Nicobar, who seem, as in all the larger islands of the Indian Archipelago, to have retired before them.

Appendix No. 3 contains instructions for the re-occupation of the Andaman Islands as a convict settlement. Assuming that the convicts will "for the most part, be men who have been led to the commission of crimes against the State by the example of others, and not men of a desperate or unmanageable character," they "may at once be put in a position analogous to that allowed to convicts of the third class in the Straits Settlements, and the best among them should be promoted at once to a class similar to the second class in the Straits, and employed as Sirdars or Tindals over the others. Degradation to a fourth or lower class, and the imposition of irons, may probably be reserved as punishments for the refractory." In forming them into gangs, men "of the same religion may, as far as shall be otherwise convenient, be brought together; but a gang once formed must invariably mess together, and no objection to obey orders on the ground of caste is to be admitted." The wives and children of some of the mutineers are to follow them from India.

Extracts from the correspondence of Dr. J. P. Walker, the Superintendent of Port Blair since its reoccupation, follow. The first batch of 200 convicts reached the settlement on the 10th March, 1858, and were immediately set to clear Chatham Island. Dr. Walker expresses himself ready to receive 10,000 convicts during 1858, and the same number yearly for the succeed-

ing five years. Double that number could be received if two months' notice were given, nor need the free establishment for working them exceed Rs. 500 per 1000 convicts, in excess of that required for the Head Quarters. The convicts made several attempts at escape, but on the whole their conduct was good. They are paid at the rate of 2 Annas a day when employed on miscellaneous work, or Rs. 3-2-0 per section of 25. Twenty-five convicts had with great difficulty been induced to send for their families. On joining them they will receive permission to reclaim and cultivate land free of rent during their own and wife's life-time, and pecuniary assistance during the first three years. The object in the whole organization of the convicts, is "to offer every inducement to habits of self-reliance and self-management, by so arranging that industry shall bring its own rewards, and idleness its own punishments."

Permission is asked to select Ross instead of Chatham Island as the Head Quarters of the settlement. It is in all respects more suitable. Supplies and stores must be procured from Calcutta. From 10th March to 11th June, 1858, 773 convicts had been received:—

Casualties.

Died in Hospital, ...	64	
Escaped uncaptured, ...	140	
Suicide, ...	1	
Executed, ...	87	292
Remaining, ...		481

Statement of the convicts treated in the Settlement Hospital on Chatham Island, from the first landing of convicts on the 10th March last, up to the end of May.

Classes of Disease.	Admitted.	Total.	Discharged.	Died.	Remaining.
Fever, ...	46	46	34	3	9
Diseases of the Lungs, ...	6	6	4	1	1
,, ,, Liver, ...	1	1	1	0	0
,, ,, Stomach and Bowels,	121	121	63	33	25
Rheumatic Affections, ...	17	17	16	0	1
Abscesses and Ulcers, ...	27	27	9	2	16
Wounds and Injuries, ...	10	10	7	1	2
All other Diseases, ...	36	36	24	6	6
Total, ...	264	264	158	46	60

Many of the convicts were in a sickly state when received. Dr. Walker asks for a company of Native Infantry of Seikhs and Ghoorkas or of Madrassees, in addition to the guard of 50 men of the Indian Navy, to furnish advanced guards to convicts working in the jungle. Their wives should accompany them, and they might receive assignments of land as it is desirable that this should not be exclusively a convict settlement. Though the use of tobacco was specially prohibited by Government, Dr. Walker was forced to allow it from the prevalence of bowel complaints caused by the want of it, and the use of roots and barks in place of it. In the last report given, dated 8th August, 1858, Dr. Walker says:—"To-day 654 convicts are present, of these 474 are located on Ross Island and 180 (including all the sick of the settlement) on Chatham Island."

Appendix No. 4 contains Lieutenant Colebrooke's Journal of a Voyage to the Andaman Islands in 1788—90, and his Account of them printed in *Vol. IV. of the Asiatic Researches*, 1795, with a small vocabulary of the Andaman language.

Appendix No. 5 treats of Barren Island. Dr. Playfair says,

"Barren Island, so called from the scanty vegetation which shews itself on its fire-formed rocks, is 50 miles east of the Great Andaman, lying in 12° 15′ North latitude, and 93° East longitude. It forms a link in the chain of volcanic action which, commencing in the Island of Java, extends North-west and North in a curved line, shewing itself in the Bay of Bengal in Barren Island, in the Nacondam Rock, an extinct volcanic summit 45 miles directly east from Port Cornwallis, and in the mud volcanoes on the coast of Burmah.

"Barren Island was visited by Lieut. Blair of the Indian Navy in the year 1789—it was then in a state of violent eruption, large volumes of smoke and vapour issuing from its summit, and huge masses of rock being ejected to a considerable distance from the crater. Another account of the Island appeared in the *Asiatic Researches*, upwards of 40 years later. The writer when passing in his vessel, was induced to land. The volcanoe although smoking, was at that time quiescent.

"The island is nearly circular, has a diameter of 2970 yards, and is formed of high ridges averaging 970 feet, which slope at an angle of 45° towards the sea, and inwards at a larger angle to the base of a central cone 975 feet in height, and having a diameter of 2100 feet at its base." At the break in the outer ridge there is an abrupt wall of lava 20 feet in height, but to the east of it there is a sandy beach where a landing can be effected. There is a hot spring. The cone which rises at an angle of 40° is covered with fine ashes. Some smoke was occasionally seen to issue from its slope. The heat was felt through the soles of the shoes in ascending. The bed of the island is 50 feet above high-water mark.

Dr. G. Von Leibig reports on it. He concludes "that the circular valley and its walls constitute the crater of a huge volcanic cone of sub-marine basis, which had been the vent for fluid masses of rock, when such eruptions took place on a larger scale than in more recent times. The smaller cone in the centre of the old crater, corresponding in its size to the diminished forces of volcanic action, is of recent origin, and represents those smaller cones of still active volcanoes which are usually distinguished as cones of eruption, from the original cones, also called the cones of elevation. We have it on record that about 60 years ago, the crater of the little cone was throwing out showers of red-hot stones of several tons' weight, and enormous volumes of smoke." The cone is 980 feet high. While Dr. Leibig cannot predict certain and lasting success to an undertaking for the manufacture of sulphur, he thinks that the situation of Barren Island offers every facility for a

preliminary trial. All depends on the quantity of sulphur present and the rapidity with which it will be replaced.

The whole Report is illustrated by pictures, maps and plans.

THE DRAINAGE OF CALCUTTA.

On the 21st of March, 1859, the Municipal Commissioners of the town of Calcutta submitted, for the consideration of the Lieut. Governor of Bengal, the Messrs. Rendel's Report on the proposed new system of the Drainage and Sewage of the town. This report is accompanied by the remarks and suggestions of Mr. Clark, their Engineer, on the scheme. The Commissioners express their own opinion on the question. "The Messrs. Rendel's Report embraces three distinct schemes:—

"1*st*.—A revision and further modification of the plan of the committee, making the Salt-water Lake the receiver of the drainage and sewage of the town.

"2*ndly*.—A new plan of Messrs. Rendel, for discharging the drainage and sewage into the river Hooghly.

"3*rdly*.—A plan for supplying the city with water, which Messrs. Rendel consider an indispensable adjunct to the drainage, under any circumstances.

"The first scheme, Messrs. Rendel admit, will entail a very heavy increase of expenditure; the second, they recommend on the score of economy, whilst the cost of the last, they estimate at 28 lacs of Rupees, *in addition* to that of the drainage works themselves."

The Commissioners agree with their Engineer that, as to the first, the alterations are not essential, and that the second is the very reverse of economical, and the Thames nuisance of last year strongly militates against the medical evidence collected on the subject of innocuousness. It is also open to all the objections attendant on an intermittent outfall, which is fatal to the Messrs. Rendel's scheme in a climate like this. Moreover the Circular Canal can never be made entirely subservient to the drainage of the town, and unless this is conceded the 2nd scheme falls to the ground. The outfall of the sewers would be closed for six hours every tide during the dry season. "The river Hooghly off this city is more like a large dock which is filled with ships of the largest size, and where almost the entire population resort to bathe and perform their religious ceremonies. The traffic across the river in connection with the growing town of Howrah and the Railway Terminus is daily

becoming greater. At present the banks of the river are sufficiently filthy, and the difficulties under which the inhabitants perform their ablutions and take away the water for domestic purposes, are apparent to all observers." A new system of drainage ought to *improve* the existing state of things.

As to the third scheme—a full supply of water, it forms a distinct question to be considered at a future period. A Joint-Stock Company might carry it out as in the case of gas. But the great objection to all three plans is their expense, involving additional taxation. "Whilst the total estimate of the Drainage Committee for the cost of the drainage and water supply was Rs. 46,73,000, Messrs Rendel's revisions and modifications swell it up to Rs. 65,81,000, whilst their own plan with regard to the Hooghly brings the expense to Rs. 60,00,000, *exclusive* of the outlay for the land and buildings which must be bought up, to allow of the construction of the additional sewer recommended by them."

The Commissioners therefore reject the Messrs. Rendel's river scheme. As to the plan recommended by the Drainage Committee with the modifications suggested by the Messrs. Rendel, which recommends the construction at first of *one* of the receiving sewers with its branches, they prefer to try the experiment in Dhurrumtollah. Its construction would settle the following questions:—

"1*st*.—Whether Mr. Clark's plan as altered and modified by the committee, may be carried out altogether.'

"2*ndly*.—To what extent the efficiency of the drainage is dependent upon a diffused system of water-supply?

"3*rdly*.—Whether the additions and modifications proposed by Messrs. Rendel are necessary, or whether they may be partially or perhaps altogether dispensed with?

"4*thly*.—Whether the estimate of the total cost of the drainage scheme may be depended upon as covering the actual outlay?"

As to the 2nd point, a water supply, if necessary, could be procured from the Chandpal Ghat engine. The cost of the experimental sewer can be met by existing means without a loan. The whole risk is only Rs. 50,000 and it involves the question of whether 47 or 65 lacs are to be expended. The Commissioners conclude by saying that the proposals of Mr. Clark, their own Engineer, "are entitled to the strongest confidence."

The report of the Messrs. Rendel follows:—"Calcutta is so situated, that its drainage may be taken either into the river Hooghly or the Salt Lake." The plans of both the committee and Mr. Clark contemplate the removal of the sewage into the latter. The plan of the committee is selected for consideration as it "exhibits in a more complete manner the

result of attempting to work out the principles on which both are founded. Those principles are, that the sewage of that part of the town, lying north of Dhurrumtollah, is to be conveyed by ordinary house and street drains into great main sewers, having inlets at the river and passing thence eastwards through the town to the Circular Road, whence they are continued, by a great intercepting drain, running from near the northern extremity of the city, along the Circular Road to the head of the Balliaghatta Canal. The sewage of the southern portion of the city is to be conveyed into another intercepting sewer, running from Tolly's Nullah, near Allipore Bridge, along the Circular Road to join the other sewers at the Balliaghatta Canal. The levels of the river inlets of these main sewers will be from 12 to 13 feet on datum. Their average inclinations will be 2·82 feet per mile; the maximum being 4 feet per mile. The level of their outfall inverts will be 5 feet on datum." The water is here pumped up into another covered sewer "by which it is conveyed to Tengrah Creek, two miles distant, down which it will flow into reservoirs formed at the junction of the creek with the main channel of the Salt-water Lake into which it will be discharged at the ebb of tide."

In the rains the storm and sewage waters will pass off together at Entally. To give the necessary velocity to the sewage it is proposed to admit water from the river to secure it to the extent of at least 2.5 a second. "The estimated cost of this, which we may call the outfall part of the scheme, exclusive of profit, superintendence and contingencies, is

For the five main sewers, including works at Entally, ...	Rs.	8,28,000
For the pumping establishment, the Engines being estimated at 70 h. p. in duplicate, ...	„	2,80,000
For the covered sewer to Tengrah and the works and reservoirs at its mouth, ...	„	77,000
For the land and rights required to be purchased for the pumping establishment, reservoirs, &c, ...	„	61,000
Total, ...	Rs.	12,46,000"

The principles of this scheme are the best possible but the mode of carrying them out is defective.

The Messrs. Rendel then go on to consider the grounds on which the river has been rejected as the drainage outfall, and the subject of water supply to keep the sewers clear of deposits.

The opinions they have expressed and the recommendations they have made, they thus summarise:—"*First.*—That the principles of the plan proposed by the committee are the best which can be devised for conveying the sewage to the Salt Lake.

"*Second.*—That the levels of the intercepting sewage require alteration in order to prevent the ponding of the water in them.

"*Third.*—That the levels of the whole system of outfall sewers require to be lowered 1 foot 6 inches, in order to give a sufficiently continuous flow from the river.

"*Fourth.*—That the pumping power provided is altogether insufficient.

"*Fifth.*—That the consequence of the above necessary modifications will be a large addition to the cost of the outfall works.

"*Sixth.*—That there is no valid reason against the use of the river Hooghly as the sewage outfall.

"*Seventh.*—That such an outfall would be attended with great economy and efficiency, and would render pumping and its large annual cost unnecessary.

"*Eighth.*—That it would give the opportunity of converting the Circular Canal into a dock, and thereby greatly increasing its usefulness and capacity.

"*Ninth.*—That the water supply should be brought from the neighbourhood of Fultah.

"*Tenth.*—That it should be pumped up over a stand pipe at Entally and thence distributed over the city, and

"*Eleventh.*—That with a view to economy, the supply should be intermittent."

Mr. Clark, the Engineer, enters *seriatim* into these recommendations and shews that they are unnecessary. He considers that the plan proposed would signally fail both in its self-cleansing action and in its power of discharging the quantity of water which must be provided for during the rainy season; and also that it would be attended with very serious difficulties in execution.

The Executive Engineer of the Circular and East Canals, and the Collector of Tolls, both report against making these canals subservient to the drainage of the town. A memorandum by Mr. Dowleans, one of the Municipal Commissioners, on the whole question, follows. It forms the basis of the Report of the Commissioners already summarised.

COL. A. COTTON'S MEMORANDUM ON THE PROPOSED BEITKUL AND HYDERABAD RAILWAY.

On the 13th September, 1858, Col. A. Cotton forwarded to the

Madras Government his remarks on the Bombay minutes of the Members of Council on a Railway from Beitkul Harbour to Hyderabad, prepared in obedience to the orders of that Government. The question he thus states:—"Is it expedient to construct a Railway (of course for high speed like those already constructed) from the proposed harbour of Beitkul to Hyderabad?"

And he divides it into these three:—"1st. Will a Railway answer as a speculation?

"2nd. Is it a more beneficial way of spending money on that tract of country than any other?

"3rd. Will it answer its purpose, that is, will it carry such quantities and at such cost as the country requires?".

The enquiry involves a comparison with other kinds of communication such as common roads, light railways and water ways.

1*st. Will a Railway answer as a speculation?* Look at the actual results on the lines now in operation. The *apparent* profit on the East Indian Railway of 130 miles in Bengal, is six per cent. But an allowance must be made for depreciation and repairs for which, according to American data, 3 per cent. must be deducted. This leaves a profit of 3 per cent. on the line of greatest returns of any that could be formed in India. The profit on the Bombay line of 140 miles is 5 per cent. but the profits include no sufficient sum for repairs or renewal, nor do they take into account the cost of the Bore Ghaut works, about 80 lacs, which alone would reduce the profit to 3 per cent. and allowing 3 per cent. for repairs and renewal, the profits would be *nil*. On the Madras line of 96 miles the profits are 3¼ per cent. which, with the deduction for repairs and renewal, become ¼ per cent. The traffic may increase as the lines extend on the *part now worked*, but *the average of the whole* will diminish. In England the net profits are 4 per cent. on the capital, and the average cost about £35,000 a mile. While it is true that the average cost of Railways in India will be only about a quarter of those in England, nothing like a quarter of the number of travellers could afford to use Railways here at English charges. Hence Indian Railways will not make such profitable investments as in England "Again, in Massachusets, where the average cost was only £9,000 a mile, the profits were 6¼ per cent. and the wealth of the community there is of course many times that of India. Also the value of money there is much less than in India, and the £9,000 a mile represents a less capital than 90,000 Rupees invested in India."

There is great doubt thrown on English accounts, there being a strong bias to put as much as possible of the expenditure to the item of new capital, and to have large sums under the head of

unadjusted accounts. If none of the lines immediately adjoining the three capitals of the Presidencies pay even their guaranteed interest, it is not likely that a line in an out-of-the-way part of the country like that from Beitkul to Hyderabad will pay its expenses. More than this, it will compete with the Bombay line, and while it does not itself yield profit will diminish the traffic on that.

2*nd. Is this Railway a more beneficial way of spending money on that tract of country than any other?* In an Appendix Col. Cotton shews that, even with the present traffic on the Bengal Railway, "there would be a saving of 15 lacs a year, taking together the profits to the shareholders and the diminished cost of transit to the public, and probably, including the new traffic that would be produced by the lower rate of transit, not less than 25 lacs a year, had a canal been constructed on this line instead of a Railway, and that had the same money that has been spent on this 120 miles of Railway, been spent on water-ways, it would have been ample to provide all Bengal with a complete system of such water-ways of several thousand miles, conveying both passengers and goods at ½ or ⅒ of the Railway rates."

For the cost of a mile of Railway we might have

"16 miles of Road,
10 or 15 of Light Railway,
15 or 25 of Canal,
or 25 of Improved River Navigation."

while no Road or Railway can carry the *quantity* required on a main road in India. "But there is also the question of irrigation, particularly as that can be combined with navigation in the same works. Suppose that 400 miles of Railway were to be laid at 80,000 Rupees a mile, costing 3¼ millions sterling, and that for the same money at 10 Rupees an acre, 3¼ million of acres could be irrigated. The cost per acre in Rajahmundry is only about four Rupees; and the ryots water their lands at an average cost of 27 Rupees an acre per annum, showing that the value of produce must exceed that. In Rajahmundry we reckon an increase of 16 Rupees on one crop. At this latter rate, the increased value of produce on 3¼ million acres would be 500 lacs a year. But this would at the same time provide, probably, at least 2000 miles of canal navigation, besides connecting, perhaps, as much more of navigable rivers."

And as in the case of the Bengal Railway so with the Bore Ghaut on the Bombay line. A distance of 6 miles, lengthened to 13 to obtain the required gradients, cost 80 lacs. If that sum were expended on irrigation from the Kistnah and Godavery, the results would be 20,00,000 of acres irrigated, and more than

2,000 miles of navigable canal and river. The increase of produce alone would be "on an average of 20 Rupees an acre, including some two crop land, 600 lacs a year, besides 2000 miles of communication conveying goods at 1 Pie a ton a mile." In the present state of the finances "the question whether we are going to spend our money to something like the best advantage, is an essential one in every proposed work."

3*rd. Will this Railway answer its purposes?* that is, will it carry *such quantities and at such cost* as the country requires? Look at the results of the Calcutta line. The number of passengers per annum is above a million, but they travel, on an average, only about 30 miles, so that the average number travelling is 800 a day. If the vast numbers who travel in the populous parts of India were carried cheap enough, this is not a tenth part of the number that would travel along it. Not less than 10,000 would travel on the first 120 miles of this Railway if we consider that "on one of the four main approaches to Madras, 3,000 a day travel on one of the main roads. In Tanjore, away from any great city, 1,200 *men* a day; over a bridge three miles from Trichinopoly, a city of 1,00,000 inhabitants, 20,000 people a day, pass."

On the Madras line the number is 250 per day on the average of the whole. The rate (4 Pie) is altogether too high so that only the wealthier natives travel by it. On the Bombay line the average number for the whole distance was 550 a day, of which only 30 were 1st and 2nd class. On 89 miles there is an average of only 30 tons each way daily, and there is no proof that the Company could afford to carry cheaper than it does. Compare all this with the 150,000 tons already carried on the Coconada canal, which is hundred of miles from any great city.

The average of 1st class passenges on the whole line is in Calcutta 15, and in Madras 3 a day. Excepting these the remainder would prefer lower speed and lower charge, and yet high speed is not attained—only from 10 to 18 miles an hour. A steam boat canal by their side might be worked more cheaply at a higher speed. In Calcutta the lowest charge is three P. ($\frac{3}{8}d$) equivalent to $2\frac{1}{4}d$ in England. It ought to be under $\frac{1}{2}$ P. per head. On the Rajahmundry canals the charge is one P. and to obtain greater profits it is proposed to reduce it to $\frac{3}{4}$ P. Worked by men and not steam, the boats yield 30 per cent. "*The certain consequence of the construction of a Railway on the proposed tract will be that an insignificant proportion of those who used to travel will be carried at these ruinous charges, and that for this even, the country will have to be taxed in other ways to provide interest for the capital expended.*"

Consider the goods traffic, which is the first point in the ques-

tion of communication in India at present. "First, on the Calcutta line. The total quantity of *goods* last year (not coals) was 49,000 tons; supposing that they are carried 50 miles, the average for the whole length of line would be 20,000 tons. The distance carried may be more than 50 miles, but the average quantity cannot be above 25,000 or 30,000 tons, which supposes the average distance to be 60 or 70 miles. But the highest of these numbers is utterly insignificant, even as respects *quantity*. Compare it with the water traffic to Calcutta. Compare it with the reported traffic in four months on the Nuddea Rivers, 600,000 tons. I cannot find a memorandum of the total traffic on the two Calcutta canals, but unless my memory fails, it is about 3,000,000 tons a year. The boats *entering* the Circular Canal alone were 170,000 last year, a year of confusion, probably containing 2,000,000 tons."

The Railways thus carry an insignificant quantity of goods and at prices only a hair's breadth under those at which they were previously carried. As to coal traffic, the East Indian Railway carried 90,000 tons in 1857 at about Rs 5 per ton, and the river Damoodah 54,000 tons at 5¼ Rs. But it must be stated the navigation of that river is of the lowest kind, that the distance is 40 miles more than the direct line, that when the cost of conveying the coal in boats from Howrah is added, the difference is imperceptible. A canal on the line would carry the coal at 10 Annas for the 120 miles, and thus save 5¼ lacs on the present quantity conveyed. But what is the cost of carriage by Railway? Not less on the Calcutta line than six P. a ton a mile, and the same on the Madras line. Even if the Railway could carry at 4 Pie it would not answer the purposes of the country. Goods must be carried at a half or one Pie a ton a mile if possible. A charge of 4 Pie on 500 miles is Rs. 10 a ton, or thirty per cent. on the value of such goods as grain. On the Hudson goods are conveyed at 1⅓ P. a ton a mile, and on the Rajahmundry Canals with steam it could be done at less than one Pie. It is evident, then, Railways fail entirely to answer the purposes of the country in respect of *cost of transit*. There remains the question as to *number* and *quantity* to be carried. Were the rates of the Calcutta Railway very low there would be 10,000 passengers a day and 3 million tons a year, and not even a double Railway could carry that. But it matters little what they can carry when there is a communication within reach procurable at ½ or ⅓ the cost of Railways. But it is undoubted that *irrigation* to save from famine and not *communications*, is the work of the first importance in the present state of India. And in securing a supply of water to the land the second grand point can be gained of "pervading

the country with a network of the cheapest possible lines of transit, capable also of carrying an almost unlimited *quantity* and at ample speeds."

This can most easily be done in the country around Beitkul. There "the Mootah, Moolah, Beemah and Kistnah for instance form one line with a fall of 900 feet in 600 miles, to near Kurnool, being a fall of only 1½ ft. per mile." The rivers are as well supplied as any in India, and a system of canals led from them would be completely effective. "One grand line in the southern borders of this tract, *viz.*, from the sources of the Toombuddra, past Bellary and Kurnool, and thence by Cuddapah and Nellore to Madras, has now been examined throughout, and it has been ascertained that it is a perfectly practicable line from the very summit of the Western Ghauts, for a line of river and canal navigation. This line would unite with the Beemah and Kistnah line near Kurnool. For the connection with Beitkul, the Kala Nuddee is capable of being made effective to about 40 miles from the coast." And a canal could be brought along the high country opposite to that point.

Under these circumstances it cannot be a question whether "it is best to spend three millions on 400 miles of Railway here or on irrigating probably at least two millions of acres, yielding thereby an additional produce at 15 Rupees an acre only, of 300 lacs a year, and as far as possible providing for certain and cheap production, in addition to at least 3,000 miles of water communications to carry at ample speeds for all our purposes, and at one-fifteenth or one-tenth the cost of Railway carriage." Moreover, of all India this tract is the best suited for European colonization. A great part of it is situated near the sea, and at an elevation of from 1,800 to 2,400 feet. Col. Cotton comes to this conclusion. "Spending our money on Railways is in fact throwing away the greatest gift that God has bestowed upon India, and substituting for it that which can only be obtained at a cost entirely ruinous."

He suggests that "committees composed of one Engineer and one mercantile man should be appointed at each of the Presidencies to investigate this important point, at what cost such Railways as these will be able to carry goods in India."

In an addition to the memorandum he quotes the deliberate opinion of Mr. Crawford, Chairman of the East India Railway Company "that while, after several years from the commencement of the expenditure, on, by far, the most important line of Railway in India, the first 120 miles of the line of greatest traffic, the North-west approach to the capital of all India, the profit is 7½

per cent. he expects that *in the first year* the profit on capital expended on river navigation will be one hundred per cent."

An Appendix follows containing a letter from the Commissioner of Burdwan to the Board of Revenue on the traffic of the Bengal Railway with Col. Cotton's remarks on the memorandum. Also a statement of the revenue and exports of the districts of Rajahmundry from ten years before the new works of irrigation and navigation, to 1857-58 taken from the returns furnished by the Collector and Civil Engineer. "The increase of revenue in Rajahmundry alone has been £80,000 and probably more than £10,000 in Masulipatam, about 40 per cent. upon the old revenue, and 25 per cent. upon the outlay. But by far the greater portion of the lands watered have yet paid no water rate, and only 2 Rupees an acre for one crop, where it is levied. At the same rate fully £10,000 more revenue would be paid, if the rate was lowered on all the lands. And the water carriage is all free, about 1,000 miles of connected canal and river."

Comparison of the years 1841-2 *and* 1857-8.

Years.	Price of Rice per Ton.	Revenue.	Exports of Produce.	Collector's Remarks on the seasons.
		£	£	
1841-2,	£3 3*s.*	210,000	29,000	Seasonable weather, abundant crops, but large imports of grain from Arracan.
1857-8,	4-7	275,000	280,000	
	Increase or per Cent.	65,000 32	251,000 870	Scanty rains.

"That is, in a year of scanty rain, the revenue is now 32 per cent. higher, and the exports of produce 870 fold greater, than in an abundant season before the Works."

PRISONS IN THE MADRAS PRESIDENCY.

1857-58.

On the 21st November, 1858, the Inspector General of Jails submitted his annual report to the Government. "The stations

visited during the year were those of Rajahmundry, Masulipatam, Guntoor, Nellore, Chingleput, Chittoor, Cuddapah, Calicut, Coimbatore, Salem, Trichinopoly, Combaconum, Cuddalore, Tellicherry, Mangalore, and Honore, besides the large gangs at Cannanore, Guindy, Vellore and Paulghat. The total number of prisoners sentenced by the Courts and Magistrates, during the year 1857, was 3340; of these 381 were for periods of less than one month, (282 of these being by the Magistrates,) 1083 were for periods of from one to six months, 936 were for periods from 6 months to 2 years, 519 for periods of from 2 to 7 years, 418 for periods of from 7 to 14 years and 3 for life."

All notice of prisoners sentenced by Police Officers is omitted. The Inspector visited some of the prisons of Bengal and Bombay during the year. The only new work of any magnitude commenced during the year was the Salem Jail. The new Jail at Honore had been so faultily constructed that the outer walls fell down. The erection of new Jails at Ootacamund, Madura, Coimbatore, and Combaconum, in addition to the central prisons at Madras, Vizagapatam, Cannanore, Bellary and Trichinopoly, is suggested; also extensive alterations to the Jails of Chicacole and Rajahmundry, the latter of which are in progress. The following statement shews the number of persons sentenced to imprisonment by the several Courts during the year 1857:—

	Imprisonment not exceeding 1 month.	Do. above 1 month and not exceeding 6 months.	Do. above 6 months and not exceeding 1 year.	Do. above 1 year and not exceeding 2 years.	Do. above 2 years and not exceeding 3 years.	Do. above 3 years and not exceeding 4 years.	Do. above 4 years and not exceeding 5 years.	Do. above 5 years and not exceeding 6 years.	Do. above 6 years and not exceeding 7 years.	Do. above 7 years and not exceeding 8 years.	Do. above 8 years and not exceeding 9 years.	Do. above 9 years and not exceeding 10 years.	Do. above 11 years and not exceeding 12 years.	Do. above 13 years and not exceeding 14 years.	Imprisonment for life.
By Foujdary Udawlut, ...	.....	.....	...	...	...	...	...	...	76	...	...	...	...	36	3
,, Sessions' Judges, ...	5	54	54	80	78	80	86	86	196	11	4	52	3	312	...
,, Magistrates, Joint Magistrates and Assistant Magistrates, ...	282	401	1	...	...	...	...	...	...	...	...	...	...	...	...
,, Subordinate Judges, Principal Sudder Ameens and Sudder Ameens, ...	94	628	613	188	...	...	...	...	...	...	...	...	...	...	...
,, District Police, ...	3,852	.....	...	...	...	...	...	...	...	...	...	...	...	...	...
,, Village do.	6,126	.....	...	...	...	...	...	...	...	...	...	...	...	...	...
Total,... ...	11,059	1,083	668	268	78	80	86	3	272	11	4	52	3	348	3

No progress was made towards any permanent improvement in Jail discipline. Some improvement was effected in the prison guards. Most of them were armed. During the year 63 escapes occurred; *viz.* 48 at Masulipatam and Calicut, and 2 at Trichinopoly, most of them owing to the gross negligence of the guards.

The Director General of the Medical Department proposes 6 oz. of meat three times a week, as a general dietary in the most sickly Jails, withdrawing from 5 to 10 Rupees' weight of grain. On this the Inspector reports:—"A reference to English diet tables for prisoners, at hard labor for four months and upwards, would give an average allowance of only 4 oz. of uncooked meat for each day's consumption: six oz. on alternate days for natives, as now proposed, by the Director General, as a general measure, in the sickly Jails, would, with reference to the habits of the inmates, seem excessive."

The prison of Combaconum is reported as "unfit for the confinement of human beings." The Inspector visited the prisons at Alipore, Hooghly and Burdwan in Bengal, also the House of Correction in Calcutta, and the Tannah and Poona prisons in Bombay. Of the last he says:—"I did not derive many useful suggestions from my visit to the Bombay prisons, they were much overcrowded, and provision had not yet been made, in buildings, for the introduction of a better system. Though the *principle of strict imprisonment* has been fully recognised, the prison arrangements were far from complete. The employment of the prisoners at Tannah, to which large numbers of Malays and Chinese were banished, was rather *occupation* than *labor*; many were here employed outside the walls, though, in Poonah, strict imprisonment was enforced; the rules for furnishing guards seemed various and unsuited to the arrangements at this Presidency."

In Bengal the system of labour was good. Manufacturing had been greatly encouraged by allowing a very large percentage of the profits to Jailers. The cumbly-weaving at Alipore and cloth-weaving in the district jails were to a small extent, and both were far surpassed in such of the Madras Jails as have those manufactures. In the Hooghly prison "a good weaver would turn out sufficient gunny for 7 bags daily, the total out-turn daily was from 950 to 1000 bags, the produce of 262 men employed in the gunny manufacture, of whom 157 were weavers. The receipts at 7 Rupees per 100 bags must have been therefore nearly 70 Rupees daily. The Jailer's salary was nominally 15 Rupees monthly, but with commission on manufactures it exceeded 200." The Inspector objects to the system of making a Jailer's salary mainly dependent on commission. Such commis-

sion is in practice "calculated on *gross* profits, that is, the value of prisoner's labor is not deducted, all actual money disbursements alone are charged against profits, it is therefore the Jailer's interest to resort to the utmost to prisoners' labor, whatever be its nature, rather than incur money expenditure, and the result must be the sacrifice of discipline, for it is impossible to reconcile the closest saving with the rigid enforcement of penal servitude."

The arrangements for meals are represented as in subservience to this object. The men fell out, ate their meals, and returned apparently at pleasure. "The brass plates and cups were insufficient for the whole of the prisoners and had to be used by several in succession." On the whole the Madras Inspector says:—"I have no reason to think that our prisons, in essentials, are generally worse-managed, manufactures excepted, than those of the neighbouring Presidencies, though they no doubt are far behind what the Inspectors in those Presidencies would desire to bring their prisons to. I must however remark that with the limited numbers in our Jails, our prison system is capable of improvement at far less cost than that of Bengal."

He asks to be allowed 5 months' leave to visit England that he may see the best-managed prisons there. Detailed reports are appended on the following Jails:—Chicacole, Itchapore, Vizagapatam, Rajahmundry, Masulipatam, Guntoor, Cuddapah, Calicut, Paulghat, Coimbatore, Salem, Trichinopoly, Combaconum, Cuddalore, Chingleput, Chittoor, Tellicherry, Mangalore, Honawar, Madura, Palamcottah, Paumben.

From the 1st January to 30th June, 1857, 453 debtors were confined. The total amount for which they were responsible was Rs. 1,24,716. In the succeeding half-year 422 were confined for a total of Rs. 90,212. For the maintenance of the destitute children of convicts in the several Jails during the year, Rs. 105-8-8 was paid. Of a total of 5,463 convicts in Jail on 1st May, 1857, sixty-three were sentenced for life, 459 for a period above 14 years, 1532 for from 10 to 15 years, 1,234 for from 7 to 10 years, and 2437 for a period under 7 years; 4647 were employed on roads and public works, 950 on manufactures and domestic work in the Jail, and 50 were sentenced to ordinary imprisonment without labour. 68 were sentenced to solitary imprisonment for six months, and two for from 18 months to 2 years. 47 prisoners were confined for reasons of State by order of Government. The value of the convicts' labour was Rs. 1,14,659-7-10. Of the total number of prisoners 6,683 were males and 208 females. There were 42 male and 1 female prisoners under 17 years of age. Of 7,481, the greatest number of prisoners at one time, 1,076 had been in Jail once before, 129

twice, 58 three times and 18 four times and more. There were 487 deaths.

The following is an abstract statement of expenses incurred in the year in the Jails :—

	Rs.	As.	P.
Rent and Repairs of Buildings, ...	1,935	6	1
Dieting, ...	1,50,517	0	10
Clothing, and Bedding, ...	6,118	9	11
Executions, ...	311	11	2
Purchase and Repair of Tools, ...	4,310	3	11
Fetters, &c., ...	1,901	0	1
Conveyance and Payments to released Prisoners, ...	778	6	10
Rewards for the Apprehension of escaped Convicts, ...	884	0	0
Lighting, ...	3,908	11	5¾
Maintenance of Convicts' children, ...	105	8	8
Furniture, ...	1,254	10	11
Batta to Peons in transit, ...	103	10	9
Fixed Guards, ...	53,863	10	7
Extra do.	9,365	13	2
Stationery, ...	238	5	3
Medical Requisition, ...	500	0	8
Gratuities to Peons, ...	3,604	11	0
Sundries, ...	1,172	2	6
Arms, &c.	3,811	1	10
Manufactures, ...	4,517	4	0
Total, ...	2,49,202	12	5¾

The Secretary to the Director General of the Medical Department on the 13th September, 1858, submits to Government the returns of sickness and mortality amongst the prisoners for the year 1857. They shew an amount of sickness and mortality considerably above the usual average. "During the last 13 years, the average ratio of sickness in all the Jails, has been 102 per cent. on the strength, and of deaths 6 per cent.; the proportions for the year under review have been 130 and 7·4 respectively. Much was done by the Medical Officers in charge of the more sickly Jails, to alleviate the sufferings of the unfortunate inmates; the diet was altered and improved; where overcrowded, a certain number of prisoners were removed to other places of confinement; and to the sick every indulgence was shown, and care taken to have them supplied with such medical comforts as they required, and in this way much suffering was not only alleviated, but many lives were also saved."

This unusual sickness was owing to the failure of the monsoons, the irregularities in the season, the consequent scarcity and high-price of food, and prevalence of epidemic disease. The mortality chiefly occurred among prisoners recently incarcerated, who had been admitted in a bad state of health. "A very great proportion of deaths occurs within the first year of confinement; the mortality is also very high amongst prisoners in their 2nd year in jail; from the 4th to the 7th year, the ratio of mortality decreases, and the ratio increases very greatly between the 7th and 10th year. Disease is least fatal between 15 and 30 years of age; the ratio of mortality gradually increases from about 4 per cent. at that age (30 years) to 14 above 60."

General Results for 1857, *of sick of the Prisoners in the Jails.*

	Per cent.
Proportion of admissions to the number of Prisoners,	130·3
Do. of deaths do. do. do. ...	7·4
Do. of do. do. do. do. excluding deaths from epidemic cholera, ...	5·06
Do. of do. to the total sick treated, ..	5·5
Do. of do. do. do. do. excluding epidemic cholera, ...	3·9
Average daily number of sick for the year to numerical strength, ...	4·7

General Results for 1857, *of sick of the Gangs of Convicts employed on the Roads at a distance from Jails.*

	Per cent.
Proportion of admissions to the number of Prisoners,	255·03
Do. of deaths do. do. do. ..	4·3
Do. of do. do. do. do. excluding deaths from epidemic cholera, ...	3·6
Do. of do. to the total sick treated, ..	1·6
Do. of do. do do. do. excluding epidemic cholera, ...	1·4
Average daily number of sick for the year to numerical strength, ...	9·06

PUBLIC WORKS IN MALABAR, COIMBATORE, TRICHINOPOLY AND TANJORE.

Colonel A. Cotton, on the 5th March, 1858, transmits a

memorandum to the Madras Government on the ports of Malabar, the proposed Neilgherry tanks, and the project of a Canal or light Railway from Trichinopoly to Negapatam as called for by the late Court of Directors. The papers referred to him in connection with these three subjects, raise the whole question of Public Works in the districts of Malabar, Coimbatore, Trichinopoly, and Tanjore, and also the use of the Madras Railway. They are so essentially connected that they cannot be treated of individually. "What these seem each to require are:—Malabar requires a coast canal for internal communication, a first class harbour, and the irrigation of its southern talooks. Coimbatore requires general irrigation, internal cheap communications, and cheap transit to a port. Trichinopoly the same as Coimbatore. It has also a first class city, which of course specially requires cheap communications between it and the surrounding country. Tanjore having a well-organised irrigation already, requires only an improved supply of water in the monsoon, a supply in the dry season, which at present it has not, a system of cheap transit, both for the intercourse of its immense population, and for the conveyance of its already vast surplus produced to the coast and to Madras, and a secure harbour. The Railway wants, or rather it will want, some years hence when it is completed, something to do, for if the first 80 miles, leading to a city of 7,00,000 inhabitants, only pays 3 per cent., without allowing for depreciation or repairs, what will that part of it which is from one to 400 miles from any large town pay, and of which 200 miles runs through a narrow strip of thinly-peopled country, with hill country on both sides of it, producing excepting a little coffee, only tigers and fever, articles that will afford little support to a grand Railway."

Col. Cotton refers to his paper on the Beitkul Harbour* in which he shews that Ponany is the natural outlet of the interior in consequence of the breach in the Ghauts opposite to it. Cochin is the best of the secondary ports in India. There is already a narrow and shallow water communication from it 60 miles northward which, with a small canal that continues it with the Ponany rivers, forms the only but an effective carrying medium for goods and passengers along that part of the coast. It could be easily continued northward to Canara and southward to Cape Comorin, connecting all the rivers and back-waters, A perfect harbour can be constructed any where on the coast at a moderate expense, by erecting a ship break-water, and would be the outlet of a country containing perhaps six millions of people. The export of cocoanut-oil is great, and the cultivation of coffee profitable.

* Annals, Part. 1. Vol. III. page 45.

As respects the interior there are sites in the Neilgherries in which an enormous quantity of water may be stored at a very satisfactory cost, the distribution of waters over the whole of Coimbatore is almost as easy as in a delta, tanks can be constructed about the foot of the Animalays, a canal can be cut across the water-shed which lies between the Ponany and Ambravutty, and thus ¾ of a million of acres can be irrigated in Coimbatore and Malabar, and a perfect system of internal communication connected with it. They produce tobacco and cotton, possess vast forests of teak, export rice to Persia, Arabia and Africa, and might yield sugar on any tropical products.

In respect of the connexion of a port in the western coast with the interior, two things are to be considered :—1st "if a very cheap transit is made from one coast to the other of the peninsula, a very large amount of produce may be taken from the immediate neighbourhood of one coast to be shipped from the other, according to its ultimate destination."

2nd and "by far the most important thing in the whole question of a port in Malabar, the use of the Railway as the grand line of communication between Madras and Calcutta, and London, shortening the time by at least three or four days in the fine months, and by five or six in the monsoon. Though it is impossible to assign in money the value of this, yet it will be of immense value. Mails and passengers would then leave the west coast, about the time the steamer now leaves Madras, which would make a difference of five days in the fine season. The journey hence from Calcutta would then consist of:—

	Miles.	Days.
A steam voyage, ...	750	3
A rail journey, ...	450	1
A steam voyage to Aden of	1,500	6
Do. to Suez, ...	1,500	7
A rail journey to Alexandria, ...	170	1
A steam voyage to Trieste of	1,200	5
A rail journey to London, ...	,,	2
		25

"If a safe harbour is made in Malabar, there cannot be the smallest question about this being the line of communication with London, the mere saving of five days' working of the great steamers 48 times in the year, would be the interest of a very large sum of money, independent of the saving of time."

As a link in the communication between London and Calcutta, the Railway, part of which is now so unremunerative, may be

made the most of. These two circumstances, the probable communication between London and Calcutta and the extent of country requiring an outlet, shew the necessity of a first class artificial harbour. By means of water communication it would be connected with the whole coast country from Comorin to Canara, and with the whole of the interior to Negapatam, and so to Madras and all the northern country to Nagpore by the coast canal and Godavery. Col. Cotton says:—"In fact, if the coast canal is continued to Calcutta, as it no doubt will be, and the Jumna and Sutledge are connected, the whole of the systems of river navigation of the Indus, Ganges, Mahanuddee, Godavery, Kistnah, and Cauvery would be united, and the produce of the northernmost districts of India, might be brought down to the extreme southern point and shipped there, and I feel sure that at a very trifling expense this might be completed, and worked so cheap, that it actually would be cheaper to convey produce by internal water communication to this point, than to send ships to Calcutta and Kurrachee for it. I think, with an improved navigation, produce could be conveyed the whole 3,000 miles at 10 Rupees a ton."

His estimate for works in Malabar is:—

"1st, completion of Coast Canal, 270 miles, at 4,000 Rupees a mile, ...	11	Lacs.
Break-water 2,000 yards long and minor works at the Port, ...	25	,,
Irrigation of 200,000 acres in the valley of the Ponany, at 6 Rupees, ...	12	,,
Sundries, ...	5	,,
Lacs ...	53	
The works for Coimbatore should be:—		
Irrigation for 500,000 acres, at 6 Rupees, ...	30	
(including about 800 miles of navigation. Sundries,	10	
Lacs ...	40".	

Trichinopoly has at present a considerable extent of well-secured irrigation. But it wants 4 main lines of navigation from Trichinopoly to Negapatam, from the northern bank of the Cauvery opposite the mouth of the Ambravutty to Madras; from the upper Colleroon anicut to be connected with the coast canal at the portion of the French territory of Pondicherry; and the fourth would branch off from the great Eastern and Western line above Trichinopoly, and extend through Madura to the pro-

posed anicut across the Tambrapoorey in Tinnevelly. The works in Trichinopoly would cost 20 lacs.

Tanjore has an extensive system of irrigation but not a sufficiently certain supply of water even in the monsoons. It has no summer water at all, which prevents the cultivation of sugar to any extent, and it has very little water communication and that imperfect. If the two lacs spent on the Colleroon bridge had been used in the coast canal it would have cut thirty miles of it, and nearly completed the communication from Madras to Tanjore, Combaconum and Trichinopoly. This should be first attended to. The cost will not be above Rs 6000 a mile. Between Trichinopoly and Negapatam Col. Cotton proposes to make a very cheap canal line. His "rough" estimate is 6½ lacs for 90 miles, or 7,000 Rupees a mile, which would be saved on the passage of 56,000 tons of goods alone, (at 2 Annas a ton) without reckoning for passengers. But this is a mere fraction of the annual traffic there would be on this line. The traffic is already 150,000 tons a year on the main line from the Godavery anicut, though it only leads to a town of 15,000 inhabitants, and the country is only just emerging from a state of poverty; the traffic on the Trichinopoly canal would soon be 300,000 tons, and a million passengers. The passenger traffic, taken 20 years ago on the common road on this line, was about ½ million per annum."

This, the most important work to be executed in Tanjore should be connected with the four main branches of the Cauvery. "The next great requisite for Tanjore, is water for irrigation. Taking the whole area of the delta of the Cauvery at one million acres, and supposing that the supply is deficient on 180 days, and almost nothing on 120 days, we may allow for the whole of the lands 150 days at ¼ inch per day (the extreme evaporation being ½ inch) 3,400 millions of cubic yards, which at a cost of 2,000 cubic yards per Rupee, or 500 Rupees per million, would be 17 lacs. This is probably about the quantity that it would be ultimately worth while to throw into the district, but of course every million would produce its proportional effect. The cost of it would be nothing but the cost of storing it." These works would cause sugar to grow and give two crops a year, and would connect the district with Madras and the west coast. The population is about 1,000 to the square mile in the delta.

A harbour for Tanjore should be made either at Nagore or Negapatam which are only 4 miles apart, by a straight line of break-water parallel with the coast 800 yards long. "The whole peninsula would then have seven secure harbours, four on the East coast, *viz.*, Coringa, Madras, Negapatam, and Tutacorin,

and three on the West coast, *viz.*, Bombay, Beitkul, and Ponany, or Cochin.

"Thus the works proposed for Tanjore, are:—

	Lacs.
Completing Coast Canal from Negapatam to Porto Novo, 60 miles, at 6,000 Rupees, ...	3½
Trichinopoly Canal, ...	6½
Improvement of river navigation, ...	3
3,500 millions of cubic yards of water stored in tanks, at 500 Rupees per million, ...	17
Harbour, ...	8
Total, ...	38"

The cost of the whole of the works for the four districts is thus estimated at:—

	Lacs.
"Malabar, ...	53
Coimbatore, ...	40
Trichinopoly, ...	20
Tanjore, ...	38
Total, ...	151"

Col. Cotton's fundamental principle is "that nothing but cheap food, that is food raised with moderate labour by means of irrigation, and very cheap transit, which can only be obtained by water carriage, can form a sound foundation for wealth and prosperity in India." By expending 30 lacs in Rajahmundry on this principle the results have been:—"1st. A population of three quarters of a million completely relieved, as shewn by there being employment for all at about 50 per cent. higher wages than they used to get.

"2nd. A revenue increased 40 per cent., almost every Rupee of which is collected within the Fusly, whereas formerly there used to be arrears of from 1 to 3 lacs.

"3rd. A traffic on one principal canal of 150,000 tons a year, though it leads only to a town of $\frac{1}{20}$ the size of Madras.

"4th. An extent of land watered now, upon which, on the plan now acted upon about water rates, there will be levied, three years hence, 20 lacs of Rupees a year, besides the increase from extended cultivation.

"5th. A passenger transit company on the canals, making a profit of from 20 to 30 per cent. while they carry at 1 Pie ($\frac{1}{8}$ *d.*) per head per mile."

In an Appendix, Col. Cotton remarks on the Court of Director's orders about a cheap Railway or Canal from Trichinopoly to Negapatam. "The very great advantages which a Canal has over a Railroad are these:—

"1st. A canal can carry at from a quarter to one-eighth of the cost of working even a low speed Railway.

"2nd. The conveyances can pass each other any where, whether going the same or opposite ways, so that there is no confusion or interruption.

"3rd. Consequently, every thing can go at its own most suitable speed; heavy goods of little value and poor passengers at very low speeds, and consequently at extremely cheap rates; more valuable or perishable goods at higher speeds, and first class passengers at almost any speed they may require, as on the Hudson river, at 20 miles an hour.

"4th. Both goods and passengers may be landed or shipped at any point, and not only at stations five or six miles apart.

"5th. It requires much less attention and skill to keep it in good order.

"6th. In a tropical country every hundred yards of canal is a public benefit, as supplying water for drinking, &c.; independent of its navigation.

"7th. All the different kinds of power and modes of applying each, can be used on the same canal. Boats may be tracked by men or horses, or bullocks; they can be worked with paddle wheels or the screw; by men or by steam; they may be poled or rowed, &c.

"8th. They can accommodate a vastly greater traffic than even a double Railway.

"9th. They can be worked by means of vessels of all sizes."

The different points in the question of a canal are:—

1*st. Cost*, which depends on dimensions.

A canal made for boats drawing 3 feet, 9 feet wide, 150 long and carrying 70 tons, would cost:—

In the Delta.

	Rs.
"Excavation of 24,000 cubic yards, at 1½ Anna,	2,250
Lockage, 3 feet, at 400 Rupees, ..	1,200
Land, 15 acres, at 60, ...	900
Houses, &c., ...	500
Aqueducts, 20 feet water-way, at 50 Rupees,	1,000
	5,850

50 miles, at 6,000, ...	3,00,000
Branch to Nagore, five miles, ...	30,000
Out of the Delta.	
40 miles, at 8,000, ...	3,20,000
	6,50,000
Storing 50 millions cubic yards of water, at 1,000 Rupees,...	50,000
Total, ...	7,00,000"

2nd. Traffic. The city of Trichinopoly contains above 80,000 inhabitants, Tanjore, 60,000, Negapatam and Nagore 40,000 Combaconum, within 10 miles of which it would pass, 60,000, and the delta 2,000,000 in about 2,500 square miles. The value of land averages about £5, an acre, corresponding with £30 in England. Besides a dense and thriving population the second thing that produces traffic is a low cost of carriage. The actual cost on the Rajahmundry canals is about one Pie (½*d.*) per ton per mile, for short trips, but with good and large boats it might be worked cheaper. In 1852, there were 1,608 boats in the Rajahmundry canals, in 1858 the number rose to 13,460, besides rafts. The total tonnage of goods was 150,000 tons. Allowing for the fact that the demand for boats has always been in excess of the supply, that much of the delta is not connected with this channel, that there is no large city in it as in Tanjore and no cheap line of traffic into the interior, it may be concluded that the goods traffic on this canal would be several hundred thousand tons. The passenger traffic will be something unprecedented, probably 2 or 3,000 a day.

3rd. Value. If we reckon the saving on every ton of goods at 2 Annas and on each passenger at half a Pie, and "if we allow 300,000 tons, and three quarters of a million passengers (2,000 a day) we shall have:—

300,000 tons, at two Annas,...	40,000
750,000 passengers, at half a Pie, ...	2,000
Rs. ...	42,000

as the saving per mile per annum, without allowing for saving in risk, interest, &c., and this is six times the whole estimated cost of the work." Here 38 lacs a year on the 90 miles would be saved.

4th. The Time of Execution. With very little solid masonry the whole line could be easily opened in a few months.

5th Its Connection with other Lines of Communication passing through distinct parts of the country uniting them with "the

Western coast canal, the lines north and south from the Cauvery, west of Trichinopoly to Madras and Tutacorin, and to all the peninsula and North India, meeting at Negapatam the Eastern coast canal, and improving of many of the delta rivers of Tanjore that fall into it."

6*th*. *Its Line* will be nearly straight, passing through or nearly touching every large town.

It would be advisable to try cheap Railways in places where the population is not very dense, and where there is much change of level and rocky ground. "We have here, near Rajahmundry, a small Railway, two miles in length, and two feet gauge, which has been in use for eight or nine years, and it is impossible to see it at work without asking—What possible reason can there be why such an insignificant work, which saves nine-tenths of the cost of carriage, should stop at the end of two miles, and not be extended through the country? Why should all India be waiting for cheap transit, when many thousand miles of such lines could be laid in a year."

THE

ANNALS

OF

INDIAN ADMINISTRATION.

ORGANIZATION OF THE INDIAN ARMY.

Parliamentary Papers.

On the 15th of July 1858, Her Majesty appointed a Commission to inquire into the organization of the Army lately serving in the pay of the East India Company. The Commission consisted of General Peel, the Duke of Cambridge, Lord Stanley, the Marquess of Tweeddale, Viscount Melville, Sir Henry G. Smith, Sir George A. Wetherall, Major General Patrick Montgomerie, Major General Henry Hancock, Colonel Burlton, and Colonel T. F. Tait. They were required to report on the following questions:—

"1. The terms on which the Army of the East India Company is to be transferred to the Crown?

2. The permanent force necessary to be maintained in the Indian Provinces respectively, after the restoration of tranquillity?

3. The proportion which European should bear to Native Troops, in Infantry, Cavalry, and Artillery respectively?

4. How far the European portion of the Army should be composed of Troops of the Line, taking India as part of the regular tour of service, and how far of Troops raised for service in India only?

5. In connexion with this question, the best means of providing for the periodical relief of the former portion, and of securing the efficiency of the latter?

6. Whether it be possible to consolidate the European Forces, so as to allow of exchange from one branch of the service to the other; and what Regulations would be necessary and

practicable to effect this object, with perfect justice to the claims of all Officers now in the service of the East India Company?

7. Whether there should be any admixture of European and Native Forces, either Regimentally or by Brigade?

8. Whether the Local European Force should be kept up by Drafts and Volunteers from the Line, or should be, as at present, separately recruited for in Great Britain?

9. Whether it would be possible to raise any Regiments in the Colonies, either for temporary or permanent service in India?

10. Whether the Native Forces should be Regular, or Irregular, or both; and if so, in what proportions?

11. Whether any Native Artillery Corps should be sanctioned?

12. Whether Cadets sent out for service with Native Troops should, in the first instance, be attached to European Regiments to secure uniformity of drill and discipline?"

They had power to examine Witnesses, and to call for Papers. On the 7th March 1859, they gave in their Report.

I.—*The terms of the transfer.* The 55th Clause of the Act for the Better Government of India, assures to the Indian Army the same Pay and Advantages as they enjoyed in the service of the Company. These consist in a prescriptive right to rise strictly by seniority to the rank and emoluments of Colonel of a regiment, with the option of retiring before attaining that position, or after various periods of service, on a scale of pay or pension, considerably higher than that granted to officers of the Army of the Line. No change can be made in the system of promotion by seniority as affecting officers now in the service, but new regulations may be framed in this and all other points for all who hereafter may enter the Indian Army.

II.—*The permanent Force to be maintained in India.* The amount must depend on the probability of either internal disturbances or external aggression. The estimates of force given in the evidence are most conflicting, ranging from 50,000 to 100,000 Europeans. The amount should, in the opinion of the Commissioners, be about 80,000, that is 50,000 for Bengal, 15,000 for Madras, and 15,000 for Bombay. This amount and distribution will always be affected by political exigencies, the introduction of railways and navigation, and Military considerations.

III.—*The proportion of Native to European Corps* should not be greater than 2 to 1 for Bengal, and 3 to 1 for Madras and Bombay. The Artillery should be a European force except in such stations as are peculiarly detrimental to the European constitu-

tion. In the present numerical strength and military organization of the Police Corps, the Commissioners see the elements of future danger.

IV.—*Should the Europeans be troops of the Line or a Local Force?* On this point there is no unanimity in the evidence. The majority observe that a double European Army had its origin in the double government, and the original formation was thus anomalous and exceptional; that there is no instance in history of the co-existence of two distinct armies supplied from the same source and serving the same Sovereign; that the great object of legislation in a civilised country is to produce unity of feeling and interest in the military forces, while professional jealousies and heart-burnings are the fruit of the double system; that however good the Indian Force has hitherto been, a Local Force deteriorates more than one which has European life infused into it by frequent relief, especially in such a climate as that of India; that the resources of the Empire would be crippled by having a large body of its troops placed under the control of the Government of India; that the Line Army would be deprived of the valuable experience it would acquire in India, while the Local Force could not share in the battle fields of Europe; that no Government, under any circumstances, would ever venture to withdraw from Europe the troops necessary for its defence; that the resources of the Governor General would be increased by his being allowed to select officers of the Line; that Line Regiments would not be more expensive than Local Corps, and even if they should be so, the wisest economy consists in having the best troops the State can supply; that the Local Army of India, as now constituted, is more expensive than the Line on its non-effective charges; that a double system of recruiting would operate most injuriously on recruiting in general; and that England cannot raise, and maintain permanently, very large armies by voluntary enlistment, and therefore the best troops must be supplied, at even an increased cost, if necessary, in order to compensate by their efficiency and vigour for their numerical inferiority. Should it however be ultimately decided to leave vested interests undisturbed at present, the present proportion of Line Regiments to Local Corps should not be diminished. These views of the majority are supported by the opinions of Lord Elphinstone, Sir George Clerk, Sir Charles Trevelyan, Sir Archdale Wilson, Sir Edward Lugard, Major General Pratt, Sir Willoughby Cotton, Sir Sydney Cotton, Sir Thomas Franks, Sir A. Tulloch, and others.

The Minority entertain a strong conviction that the maintenance of a powerful Local Army, European as well as Native,

is essential to the efficiency and permanence of British rule in India. To replace a body of officers well acquainted with the country by others doubtless of equal ability, but ignorant of it, would seriously impair the power and curtail the resources of the Supreme and Local Governments. The anomaly of two separate armies under the same sovereign is incident to the connexion of England with her Indian Empire, and late events have proved the benefit of having distinct armies for the three Presidencies. To dissever the Native from the Local European Force by the fusion of the latter with the Line Army, would be to destroy the *esprit de corps* of officers serving with Native troops, and to reduce them to a level below that of their brother officers. The Amalgamation would increase expenditure and practically diminish the control of the Secretary of State and the Government of India over the application of its revenues. The Minority do not admit the validity of the unqualified objections raised to double recruiting, neither do they concur in the opinions expressed, as to the alleged deterioration of Local European troops, subjected to like discipline and organization with the Line, or the crippling of the available resources of the State by the existence of a Local European Force in India. They consider such a Force to be a wholesome check on the precipitate withdrawal of European troops from India, in cases where the Home Government might happen to find itself under the pressure of political emergencies in Europe; and they feel confident that the transfer of the Indian Armies to the Crown will prove a source of present and future security to Her Majesty's Empire in India, in proportion as radical and organic changes are few, and the weight and stability of the Local Armies are maintained by largely, but economically, increasing their European element.

The Minority cite in favour of their opinions the evidence of the Governor-General of India, of the Earl of Ellenborough, of the Governor and the Commander-in-Chief of Madras, of the Commander-in Chief at Bombay, the Military Secretary to the Government of India, Sir John Lawrence and the Punjab Commissioners, Sir James Outram, Sir R. H. Vivian, Sir Frederick Abbott, the Adjutant-General of the Bengal Army, Colonels Holland and Durand, J. P. Willoughby, Esquire, and others. With a few exceptions the able men who espouse the opposite side of the question have but limited Indian experience. The Minority are quite agreed, that a portion of the European force to be maintained in India hereafter, should be supplied from the Army of the Line, to the extent, perhaps, of one-fourth, or even one-third, of the whole.

V. *How to provide for the periodical relief of the Line Army in India, and to secure the efficiency of the Local Force?* The periodical relief of the former may be effected as before, but their tour of service in India should not exceed 12 years. The efficiency of the latter may be secured by the establishment of depôt battalions, composed of the officers of one company from each regiment, having a double proportion of non-commissioned officers attached, to which all newly appointed officers, and all recruits should be sent, and thoroughly instructed in their duties, previous to proceeding to India; the depôt battalions to be disciplined under the orders of the General Commanding-in-Chief, and to be considered available for service within the United Kingdom, in cases of emergency. A convalescent station at the Cape of Good Hope might be established for the invalids of European regiments serving in India.

VI. *Can the European Forces be consolidated so as to allow of exchange from the one to the other, and if so, under what regulations so as to do justice to the East India Company's Officers.*

Exchange would be advantageous if it could be effected without prejudice to existing rights. The officers of the junior ranks might exchange, but the seniority system of promotion which exists in the Armies of India would render exchange in the higher ranks difficult. The interest of every individual junior to the exchanging officer must be affected, for better or worse, by every change that took place, and much difficulty would arise from the Funds' arrangements which could be removed only by Government guaranteeing all their liabilities, and managing them for the future. Officers hereafter entering the Service may do so under new regulations, but if Government do not take on itself the Funds' liabilities, they will be unable to keep faith with present and future annuitants unless all officers subscribe to them.

VII. *Should there be any admixture of European and Native Forces, either regimentally or by brigade?* Such admixture regimentally would be detrimental to the efficiency and discipline of both; by brigade it would be most advantageous. The preponderance of evidence is to this effect.

VIII. *Should the Local European Force be reinforced from the Line, or separately recruited for as now?* It may be partially kept up by volunteers from Line Regiments returning to England. Recruiting in England should be carried on in the same way as for Regiments of the Line, by officers of the Local Force.

IX. It would not be advisable to raise any regiments in the Colonies, composed of men of colour, either for temporary or permanent service in India.

X. *Should the Native Force be regular or irregular, or both, and if so, in what proportions?* The Irregular System is the best for Native Cavalry in India, each regiment having one Commandant, one Adjutant, one European officer per squadron, and a medical officer. The pay should be so increased as to enable them to purchase and maintain horses and arms of a superior description. The existing interests of the Regular Cavalry at Madras and Bombay should be respected, and the Irregular System should be introduced there gradually and with caution. The Native Infantry should be mainly Regular, but such a number of regiments should be organised on the Irregular System as the Indian Governors may recommend. Thus no proportion between them can be fixed by the Commissioners.

XI. *Should any Native Artillery Corps be sanctioned?* No, but every consideration should be given to native corps of Artillery which proved their loyalty in the Rebellion.

XII. *Should Cadets for Native troops be first attached to European Corps to secure uniformity of drill and discipline?* Such cadets should be thoroughly drilled and instructed in their military duties in England.

The Commissioners submit the following recommendations on points of importance not touched in the above questions, but brought to their notice in the course of the evidence:—

"1. That the Native Army should be composed of different nationalities and castes, and as a general rule, mixed promiscuously through each regiment.

2. That all men of the regular Native Army, should be enlisted for general service.

3. That a modification should be made in the uniform of the Native troops, assimilating it more to the dress of the country, and making it more suitable to the climate.

4. That Europeans should, as far as possible, be employed in the scientific branches of the service, but that Corps of pioneers be formed, for the purpose of relieving the European Sappers from those duties which entail exposure to the climate.

5. That the Articles of War, which govern the Native Army, be revised, and that the power of commanding officers be increased.

6. That the promotion of Native commissioned and non-commissioned officers, be regulated on the principle of efficiency, rather than of seniority, and that commanding officers of regiments have the same power to promote non-commissioned officers, as is vested in officers commanding regiments of the Line.

7. That, whereas the pay and allowances of officers and men are now issued under various heads, the attention of Her Majesty's Government be drawn to the expediency of simplifying

the pay codes, and of adopting, if practicable, fixed scales of allowances for the troops in garrison or cantonments, and in the field.

8. That the Commander-in-Chief in Bengal be styled the Commander-in-Chief in India, and that the General Officers commanding the armies of the minor Presidencies be Commanders of the Forces, with the power and advantages which they have hitherto enjoyed.

9. The efficiency of the Indian Army has hitherto been injuriously affected by the small number of officers usually doing duty with the regiments to which they belong. This evil has arisen from the number withdrawn for staff and other duties, and civil employment.

All the evidence points out the necessity of improving the position of officers, serving regimentally. For the attainment of this object, and for the remedy of the evil complained of, various schemes have been suggested, viz. :—

1st. The formation of a Staff Corps :

2dly. The system of "seconding" officers who are on detached employ, which exists to a certain extent in the Line army :

3dly. Placing the European officers of each Presidency on general lists for promotion." The Commissioners, unable to arrive at a satisfactory conclusion on this point, recommend a reference to the Governors and Commanders-in-Chief at the several Presidencies.

Col. Burlton, while signing the Report as a matter of duty, is at issue with his colleagues as to the proportion which European should bear to Native troops in India. He holds that to enlist all the Native Regular Army for "general service" is a measure of doubtful expediency, and in Bengal will produce serious detriment and difficulties.

The following is the most important part of the evidence :—

Major General Low, C. B., has been in the service 53 years, of which 40 were spent in India and chiefly in Bengal. There should be one European to every two natives in the regular Army. Natives might be employed as gun lascars merely in the Artillery. 45,000 Europeans and 90,000 natives will be sufficient for Bengal hereafter, including Irregulars but not Police. There should be two guns to every 1,000 Europeans, and 50 or 60 men in every regiment should be instructed to work field guns. The native force should be irregular, and native gentlemen would take service in it. The present number of native officers is unnecessarily large. A regiment should contain companies of different tribes. The rattan should be used. The system of punchayet should be continued, and there should be minor punishments

as well as by Court Martial. The three Presidential armies should be kept up. All should be required to go beyond the sea; that was not a cause of the revolt. The system of seniority should not altogether be given up; a great deal should be left to the commandant of the regiment as to who ought to be promoted, interdicting the promotion of very old men. Much younger men are promoted in Bombay than in either of the other Presidencies.

Colonel Beecher, C. B., is Quarter-Master General of the Bengal Army, and has been nearly 25 years in the service on the Staff. The European force should be as one to three. The Native force should be both regular and irregular. Irregular Cavalry is to be preferred if not too large a force. Their native officers are men of rank and means, they bring men with them to the corps and are of great service. The pay is too low. A staff corps should be formed. The present establishment of officers would be sufficient if too many were not withdrawn for the staff. West India regiments should be used as Artillerymen. No caste should be excluded but Brahmins. The Ceylon Rifles are Malays.

Captain G. F. S. Browne, of the 24th M. N. I., has served 15 years in Madras and the North West. One-fourth of the troops in Bengal should be European and chiefly in the Artillery and Infantry. The Sikh regiments are most efficient, and in four or five years they will be fully as dangerous as the Bengal sepoy. The safety of India depends on the prohibition of the importation of sulphur, for then the natives must forget the use of fire arms. Railroads do not add much to our safety, for an enemy would dig up a quarter of a mile in a night. The Bombay Army is not at all sound. The Madras Army is sound, the mass of the men being from Southern India. One-third are Mohammedan and they behaved well during the Mutiny, though there is no more dangerous man than a religious Mohammedan. The men are frequently flogged. When on foreign service they are free from the incumbrance of their families.

Sir George Clerk, K. C. B., latterly Governor of Bombay, has resided 27 years in India. One European to 4 Natives exclusive of Police is ample for Bengal. There should be 2 troops of European to 1 troop of Native Artillery. 50,000 Europeans are required for Bengal and 200,000 natives exclusive of Police. The natives raised in the Punjab should be reduced from 82,000 to 30,000 with 20,000 Europeans. A large Sikh force is dangerous; their loyalty is to be ascribed to their lust of plunder. The gentry of the country must be employed in both civil and military service. The native army may be again trusted. The

European force should be general and not local, furnished from the Line and under the Crown. The native army should be under the Government of India. It is a false measure to locate troops in the Hills; with good barracks in the plains they would be more healthy than in the West Indies, and many other colonies. The Cape should be made a depot for reliefs of regiments, and they should remain there 3 or 4 years before going to India. There should be a staff corps.

Major General Robert Alexander, late Adjutant General Madras Army, was 30 years in active service. The proportion of European to native troops over all India should be one European to three native regiments, and three European batteries to one native battery. Native gentlemen might enter the regular army without going through the ranks. There should be three armies, and the paramount authority should be vested in a military minister of war, a member of the Supreme Government of India. Promotion in the native grades should be by selection.

Col. John F. Leslie, C. B., of the Bombay Army, has command of the depot at Warley. Within the 17 months previous to November 1858, there was no difficulty in raising 10,000 men for India. The local force is now about 22,000. The men are recruited for different Arms but not Presidencies. The question put to them in the attestation is "Are you willing to be attested to serve in the Artillery (or otherwise) of Her Majesty's *Indian* Military forces" &c., and the men understand they are for that service only, or in the immediate neighbourhood to the East of the Cape. Before the Mutiny the average time of a recruit at the depot was 4 or 5 months. He goes out without drill. The expense for him before he embarks is about £16. The bounty is the same as in the Queen's Army. There are only 8 recruiting officers for the whole service. In actual practice 10 or 12 per cent. in the depot to the force in India is enough.

Sir Charles Trevelyan, K. C. B., was in India from 1826 to 1838, having various appointments connected with the Residency of Delhi, and was Deputy Secretary in the Political Department at Calcutta. About 40,000 European troops, and double that number of natives as an auxiliary force, will hereafter be sufficient for Bengal. Police should be civil, but with a *quasi* military organization. Magazines should be in fortified places at the principal stations, and should be entirely under the charge of Europeans. Troops should be massed in large bodies, and at each station there should be a fortified post. The main principle of promotion from rank to rank should be seniori-

ty. In every case of admitted deficiency an officer should be passed over. Qualifications required from officers would be a check on favouritism. Would not allow exchanges into the Queen's army according to the present arrangements. Artillery should be all European. Scientific matters in arsenals should be also entirely in the hands of Europeans. The staff, having special reference to Indian business and Indian habits, should be officered entirely from the native army. The general military staff should be composed of officers drawn from both services. So far as military service is concerned, caste should not be mentioned. The general government of India should be more completely separated from all the local governments.

Sir Robert J. H. Vivian, K. C. B., a Major-General on the Madras establishment, has been about 38 years in the service. Was adjutant-general of the Madras army five years. Is in favour of a large body of European troops raised for service in India alone. It is essential that there should be likewise a large body of troops of the line. Considerable relief might be given to the recruiting at home by the admission of Indo-Britons into the local force. They might also be introduced into the line. The men of the local force fraternise and intermarry more with the natives than the men of the line. From the return of the military forces in India, the European foot artillery of the Company was, in 1852, 5173, and in 1857, 4390. Previous to 1853 the Company had the power of raising only 12,000 Europeans to be kept in India and 2,000 at home; in 1853 this power was increased to 20,000 men in India and 4,000 at home; in 1857 there were only 357 wanting to complete. It is quite impossible to have in India less than from 60,000 to 70,000 Europeans.

Major General Sir T. H. Franks, K. C. B. has served in India fifteen years. The European force in India should be wholly composed of troops of the line. Nothing can surpass the gallantry of the local force, but it is not equal in discipline to the line. In sixteen years his regiment, the 10th foot, has had 1,200 casualties of all kinds. Local experience is of the greatest advantage, but it could be acquired in five or six years. One of the causes of the local force not being in such good discipline in quarters is the paucity of officers. A regiment should not be kept in India beyond twelve or thirteen years, and for three years of that it should be cantoned at a hill station. Is strongly opposed to filling up vacancies in any regiment in India, line or local, by volunteering.

James Ranald Martin, Esq., F. R. S. belonged to the medical staff of the Bengal army; was twenty-two years in India. No

advantage in the way of acclimation has hitherto been derived from length of residence. A man who has suffered severely from the serious diseases of India is generally injured for service in a tropical climate, and should at once be sent home. Reliefs should be frequent. The climate of the hills will prevent disease, but will not cure it. Had never seen a good barrack in India. Average age of a British regiment may be set down at 26 years; a Company's regiment the same. Soldiers should not be called on for their utmost exertion till they are 23 years of age. The Army of India should not be composed exclusively of troops of the line. Soldiers should be raised for service in India only. There should be model battalions of the Queen's army. Competition is more important than unity of action. There is little difference in the sickness of a line and a local regiment.

Colonel Sir Alexander Tulloch, K. C. B., at present attached to the Statistical Department, War Office, has served four years in India. The loss in regiments relieved every 10 years must be less than in regiments permanently resident. As respects expense of reliefs, an important change will be made in the local force by the Limited Enlistment Act now coming into operation. If the men wish to come home, they must be discharged at the end of ten years. In the event of a European war, second battalions could be raised for the line force, and the first battalions brought home. Some question of pay, or other coveted advantage, might induce a local force to mutiny. Such a case has arisen. If this happened in a line regiment it could be immediately removed. The larger the army the greater this danger. Whatever force may be employed, the large establishment which will be required in future can only be kept up by a much greater economy of life. Forces might be consolidated so as to admit of exchanges from one branch to the other. The Officers of the Bengal presidency are in a different position from the others. There the native army no longer exists. Those under the rank of field officer should be liable to be transferred to the new European corps to be formed, and if they decline, should be placed on the retired list. At Madras and Bombay they should only be transferred at their own request. The value of their claims on the funds could be calculated, and this could be repaid to those leaving the native army. All regiments of the line raised for India might be non-purchasing corps. Present local regiments, and those to be raised, should be numbered as regiments of the line. Officers should be removed to them according to their standing. The value of all the commissions in the army is about £7,000,000. The longer one stays in India the more likely is his health to be deteriorated. The following shews the mortality

in each of the Presidencies for a period of 39 years from 1817 to 1856 :—

					Per 1,000.
Bengal	Strength	377,980	Deaths	29,970	Ratio 79·2
Madras	,,	249,012	,,	15,462	,, 62·9
Bombay	,,	165,947	,,	10,152	,, 61·1
Total	,,	792,939	,,	55,584	,, 70·0

"These losses include some 200 or 300 men killed or dead of their wounds during the Mahratta, Pindaree, and other campaigns prior to 1824; also 3,750 who perished in the first, and about 1,000 in the second Burmese war, chiefly from sickness; also nearly a whole regiment lost at Cabul; likewise the casualties during the campaigns of Sinde, of the Sutledge, and the Punjaub, about 2,000 in all; and nearly 1,200 who died in the first Chinese war, all from sickness with very few exceptions. The loss arising from the climate of stations now usually occupied on the continent of India may therefore be reduced by about 8,000 or 9,000 men, or to an average of 60 per thousand annually, though the total loss from all causes has been at least 70 per thousand." The proportion annually invalided may be taken at 25 per 1,000 more. The total decrement would be 120 per 1,000 or 9,600 annually, while the average number of recruits in the United Kingdom from 1845 to 1849 inclusive amounted to rather less than 12,000 annually, so that, unless means can be adopted to reduce the morality and invaliding, the force in India alone would absorb nearly all the recruits raised under ordinary circumstances for the whole army, of which the requirements are not now likely to be less than 20,000 men a year,—probably more.

Colonel Durand, C. B., of the Bengal Engineers, has served 28 years in India. He was specially deputed to lay before the Commission opinions collected upon the questions issued by Lord Canning's instructions, and Lord Canning's own opinions with which he agrees. *Lord Canning* says in a memorandum. "At the time of the outbreak at Meerut, the Bengal army numbered about 119,000 native troops of all arms; that of Madras 50,000, and that of Bombay 51,000. The aggregate of the Madras and Bombay armies was therefore less than that of the Bengal army by 38,000 men. Exclusive of the disarmed corps, the Bengal army now amounts to about 80,000 men, and if the military organized police be included, it amounts to about 130,000 men; that is, some 11,000 men more than at the time of the outbreak at Meerut; of these 130,000 men, about 75,000 are Punjabees; and of these Punjabees probably 23,000 are Sikhs. The difference, therefore, between our posi-

tion in 1858 and our position in 1857 is, that there is now a larger native force, and that the bulk of it, instead of being drawn from Oude, is drawn from the Punjab. When the police of Madras is complete, there will be in all India about 300,000 native troops, regular, irregular, and police militarily organized." Bengal requires a European force of 45 regiments; i. e. 30 of the strength of 800 rank and file, local regiments, and 15 of the line. There are now six of these local regiments officered by European officers of six native regiments. For the other 24 there are 68 cadres of native infantry officers available. Of these two should be taken for each regiment, and upon the remaining 20 cadres there should be formed 20 regiments of regular native infantry. The 30 regiments of local European infantry should furnish officers for 30 regiments of irregular native infantry, of about 700 each in time of peace. The 30 local European and 20 regular native regiments would furnish officers for the military police battalions and for the Staff. The Cavalry should consist of 10 regiments of 440 sabres each, and three from the English Army. The local Army should have 78 batteries of Artillery. For Madras, Pegu and the Straits 12 European Infantry regiments will suffice. The eight regiments of Cavalry should be converted into three of European Cavalry and five of Irregular native Cavalry, but gradually. For Bombay exclusive of Rajpootana 12 European regiments will be sufficient. Reckoning the Military police, the proportion of Europeans to natives should be that of two to five. No appreciable strength of Native Artillery should be maintained. Officers should exchange between the Local Force and the Line, and divisional and brigade commands should be distributed between them in fair proportion, but the subject has its difficulties. A staff corps would not work so well as the system of *seconding* in the Queen's Army. Lord Canning does not share in the objections made to the withdrawal of officers from their regiments for staff employ. He hopes that no systematic introduction into India of African, West Indian, or foreign Asiatic troops may take place. A higher scale of education should be exacted from cadets, and before coming out to India they should be attached for a time to a Queen's regiment in England. Meanwhile the raising of troops mainly Hindostanee must continue on account of the preponderance of Punjaubees and Sikhs. *Colonel Durand* says. "The position of the Governor-General would be lowered in the eyes of the natives if he had not control of the armies. He would give a consultative power to the Commander-in-Chief here, to be exercised over the Indian Army through the Secretary of State and Government of India, but no direct authority or control over the local Commander-in-Chief. The sympathy of the

people is against us in that part of the country where the military operations are being carried on. The Punjaubee levies are not under the Articles of War; commanding officers can dismiss for misconduct, and the Board of Administration can increase or diminish the force. He would divide the Bengal army, but keep them under one command."

Dr. John Maclennan, of the Bombay Medical Service, advocates the compulsory cure of public women to check venereal disease, which ruins chiefly young soldiers. With the exception of cholera, from 50 to 70 per cent. of the cases in hospital are excited by drink and syphilis. Every regiment should have a chaplain. The present system of 'station' chaplains does little good to the men.

The Earl of Ellenborough, G. C. B., is of opinion that there should be two armies in India, that one force should be balanced against the other. The best education for every civil servant in India is service in the native army. The local force should be under the same articles of war as the line. He anticipates no inconveniences from raising a local force for India of 60,000, as it is a popular service. One European regiment requires two natives.

An Appendix follows containing Papers laid before the Commission. The Strength of Troops of H. M.'s Regular Army on the Indian Establishment in October 1858, is shewn in the following table:—

	Effectives—All Ranks.								
	Cavalry.	Foot Guards.	Infantry.	Royal Artillery. Horse.	Royal Artillery. Foot.	Royal Engineers.	Military Train.	Medical Staff Corps.	Total.
East Indies:—									
Bengal ...	3,269	—	49,310	429	2,670	259	239	73	56,249
Bombay ...	3,384	—	15,616	247	1,211	226	—	—	20,684
Madras ...	1,345	—	10,484	238	713	—	—	—	12,780
Total in India and on passage out ...	7,998	—	75,410	914	4,594	485	239	73	89,713
Depôt of Regiments on Indian Establishment ...	1,595	—	12,081	—	—	—	—	—	13,676
Total ...	9,593	—	87,491	914	4,594	485	239	73	103,389

The following return shews the Strength of the Local European Force :—

Bengal. (Sept. 1, 1858.)	Infantry		2,743
	Artillery and sappers, including recruit battalion		3,187
	Light cavalry		1,522
	Camel corps		152
	Invalid battalion		146
	Yeomanry cavalry and other irregular horse ...		599
	Eurasian battalion		75
			8,424
Madras. (July 1, 1858.)	Infantry	2,745	
	Artillery and sappers	2,110	
	Veterans	318	
			5,173
Bombay. (Jan. 1, 1858.)	Infantry	2,656	
	Artillery and sappers	1,832	
			4,488
	Total		18,085

The number of men who have volunteered in India from 1843 to 1852 inclusive is 5,515. The number of men, in Queen's Regiments not commissioned officers, who have purchased their discharge from 1843 to 1856 is 2,746 to a total strength of 421,452, or one in 153. The number in the E. I. Co.'s Artillery and Infantry for the same period is 612 out of 175,119, or one in 286. The following table shews the difference of deaths in the first year between regiments that have proceeded direct to India and those which arrived there from Australia and the Cape :—

No. of Regiments.	Whence proceeded.	Strength.	Deaths during the first year of Service.	Average Deaths per Cent.
3	Australia . .	3,260	264	7·8
5	Cape of Good Hope . .	4,513	221	4·8
8	England . .	7,863	866	11·0

The ratio of deaths per 1,000 of strength for the Local Europeans and Line on an average of 13 years is

	Local.	Line.
Bengal, ...	61·1	67·2
Madras, ...	30·6	39·0
Bombay, ...	33·7	45·9

But when deductions are made for casualties in action the ratio is 19$\frac{1}{10}$th per 100 in the Line against 25$\frac{1}{10}$th in the Local

Force. But the loss in the East India Company's European force has been greater than that of Her Majesty's Army in Bengal by above $2\frac{3}{10}$th per thousand, and less in the Madras and Bombay presidencies by $5\frac{6}{10}$th and four per thousand respectively. The ratio per cent. of invaliding in the Locals is 2·88 and in the Line 2·11. The total cost of a Local European Regiment is £76,957 a year, allowing 12 officers to be absent in Staff duty. For a Line regiment in India it is £85,271 allowing three officers to be on detached duty. The cost of a Regiment of Native Infantry is £27,761 a year.

In a Minute on the Artillery, Lord Canning says. "The strength of European artillery on the 1st of May 1858 actually serving in the Bengal presidency was 5,363. In addition to this there were 1,363 native artillerymen, besides 1,071 lascars. Before the mutiny, there were 2,283 native artillerymen, besides 1,125 gun lascars and 1,223 drivers; this omits all note of the irregular or contingent artillery, which counted twenty-three batteries. I do not think that the Bengal presidency can be made safe with fewer batteries than the late existing number of seventy-eight, nor with fewer artillerymen than may suffice these seventy-eight batteries, with a reserve for siege ordnance, for garrison and other duties.

This object may be attained with thirteen battalions of eight companies; six companies at 120 men, 720; two companies at 70 men, 140; total per battalion, 860 men; the grand total would then be 11,180 European artillerymen. These numbers include drivers. The six strong companies would be attached to batteries, and the two weaker companies would form reserves, from which the others would be kept up to their strength, and the requirements of magazines and depots supplied. The strength here proposed for the companies is the minimum.

In regard to cost, a regiment of Her Majesty's infantry, of nine companies, and 1,068 bayonets, costs about 61,000*l.* per annum. A battalion of artillery of 860 men, and with fewer field officers, may, therefore, be reckoned to cost about 53,000*l.* This will give, for thirteen battalions, a total of 689,000*l.* The present cost of the artillery force of Bengal is 457,000*l.* per annum for the regular artillery, and about 80,000*l.* for the artillery of the contingents; in all, 537,000*l.*

The increase of cost would, therefore, be about 125,000*l.*, to which would have to be added the cost of the Punjab native artillery, if this should be retained for frontier service. It may be reckoned at 18,000*l.* The whole increase in such case would be 170,000*l.*"

In Madras the Artillery should consist of 6 Battalions each of

8 companies with a total of 5,160 men. The number of officers absolutely essential for the command of the proposed force should be seven battalions, giving a total of—

Colonels	7
Lieutenant-Colonels	14
First Captains	49
Second Captains	49
Lieutenants	154
	273

Being an increase of 105 over the present establishment.

The Artillery force for Bombay should be—

4 or 5 battalions of officers.
5 Colonels.
10 Lieut.-Colonels.
35 First Captains.
35 Second do.
110 Lieutenants.

Total 195

Five battalions of artillerymen, each consisting of eight companies, viz. :—

6 companies at	120
2 do. do.	70
Total for battalion ...	860
Do. do. 5 do. ...	4,300

Lord Clyde replies to the 1st, 2nd, 3rd and 4th Series of Questions on the Reorganization of the Army. He thinks the administering of an oath to native recruits a matter of indifference. They should wear a loose dress or tunic, loose trousers, and turbans; the tunic and trousers of light material in summer, and of some warm cloth in winter. They must be trained to act occasionally with no Europeans, save their own officers. There is no fear of their looking down upon European troops, but we should never again rely upon their *feelings* of dependence on Europeans, or on any other of their supposed *feelings*, but place it altogether out of their power to do serious mischief, which is by no means incompatible with getting good service out of them.

He recommends that men should be enlisted for a certain number of years, ten or twelve say, and only those who were considered good men in every way should be allowed to remain beyond that period, and then as a favour. These, of course, would be the only men who would eventually obtain pensions. Even the men who were allowed to remain (who should be limit-

ed), should only be re-enlisted for ten years more, and so on. After 22 years' service, if a man was not allowed to re-enlist (owing to physical unfitness, or otherwise), and his conduct had been good throughout his service, a trifling pension might be given. After 30 years' service a well-conducted man might claim a pension. Some such system would make the men anxious to conduct themselves well, and would make promotion tolerably rapid, hereby doing away with the great evil of aged non-commissioned officers.

"Commanding officers should have authority to discharge a sepoy, to reduce a non-commissioned officer, or to confine a sepoy for—days, and with stoppages of pay for the days in confinement, as in the Queen's service, always recording the circumstance in their regimental orders, and stating the nature of the offence; they should have power to stop a man's furlough. But above all, they should be as little interfered with as possible by superior authorities in matters of regimental detail. The Asiatic soldier must look to his commanding officer as very powerful. If a regiment is in bad order, and the commanding officer obviously inefficient, the Commander-in-Chief should be able to deprive him of command at once, and to place an efficient officer in his stead. This will answer much better than a constant vexatious interference."

The answers of *Major General Birch, C. B.*, Military Secretary to the Government of India, to the questions on the Indian Army are given in the Appendix. He says. The Goojurs, Jats, Guallas, boatmen, the men along the right bank of the Indus and from Bundlecund, might with advantage be more numerously entertained in the Indian Army, but they are not excluded. Recruiting is carried on by parties sent out with the sanction of the Commander-in-Chief, and by native officers and men proceeding on furlough. The tesheeldar to whose jurisdiction the village of the recruit belongs, verifies his name, caste, parentage, and residence. The district officer satisfies himself of its correctness, and it is handed to the commanding officer of the regiment. Low caste men should not be admitted into the Army to any great extent; there should not be in any corps more than one-third of its complement consisting of Mussulmans, nor Rajpoots, nor Sikhs; but these tribes together might unobjectionably form half of any regiment, or more than half. He is strongly of an opinion adverse to police corps as armed and trained military bodies. Copies of all registers of recruits should be deposited in the Adjutant General's office. The native infantry should have the percussion musket. Each European regiment should have a native irregular regiment attach-

ed to it, but with its own officers. The Articles of War, which are applicable to the three Presidencies, should be altered so as increase the powers of commanding officers thus. "In cases of light offences, *or in the maintenance of discipline*, a commanding officer may, without the intervention of a court-martial, *cause corporal punishment with a rattan, to the extent of three dozen strokes, to be inflicted summarily on any sepoy*, or may award &c." These Articles are read on parade once a quarter. Except in special cases sepoys are debarred from promotion who have not a competent knowledge of reading and writing in at least one character. As a class the native officers are extremely inefficient and useless. The majority of them sided with the Mutineers on compulsion. With the exception of a few who have superior qualifications, the grades of native commissioned officers should be discontinued, and two European Serjeants put in each company able to speak Hindostanee fluently, and liable to be dismissed for drunkenness. There should be no retiring pensions except in cases of rare merit, and for men wounded on the field. But a scale of good service pay, and the occasional employment of the sepoy on the staff of the Civil police, or in the Military police, would be valued. The prestige of the British soldiery has preserved our power in India, and not the native army in any considerable degree. If two Serjeants are given to each company it will amply suffice that the number of officers required to be invariably present with a native regular corps should be, besides the Commanding officer, the Adjutant and the Quarter-master, three Captains, and three Subalterns. Leave within easy recall might still be given to officers, though, for the time, the minimum number be thereby diminished. This, with eight companies in a regiment, gives one officer to each company, including the staff, and it leaves half the officers, eight per regiment, for staff employ and occasional absence on furlough.

As to Artillery, native gunners should no longer be employed, but native drivers are necessary. In the lines of the Artillery companies there is a number of men called Omedwars or candidates, from whom the Golundaz are mainly recruited. All are sworn on a gun and engaged for general service. Two syce-drivers per battery are instructed in shoeing horses. The following number of European Troops of each arm are necessary for Bengal.

Horse artillery	... ...	12 troops.
Foot artillery	... ...	80 companies with 65 field batteries.
Engineers	... ...	3 companies.

Dragoons	... ...	21 regiments.
Infantry	... ...	68 regiments.

A Cavalry regiment should not exceed 350 in non-commissioned and rank and file, an Infantry regiment 800 at most. Of the old Bengal Army, the following regiments still remain:

Regular Regiments

Entire, armed, unaffected by the mutinies	The 12th „ 31st „ 66th „ 73rd	... ...	4
Portions remaining faithful when their comrades mutinied	The 42nd. Portions of other regiments, estimated in all at about 2,000 men.		
With their arms restored and now on service in China	The 47th „ 65th „ 70th	... ...	3
Regiments which are likely to have their arms restored	In the Punjaub ...		4
	In Bengal		2
		Total	16
Irregular regiments on the same footing as the line; but officered as irregulars	Kelat-i-Ghilzie. Sirmoor. Nusseree. Kemaon. Ferozepore. Loodianah.		

640 privates is a sufficient complement for the regular regiments, as in 1831.

There should not be more than 30 regiments of Regular Native Infantry, and all in general service. The above, if all of the line, would make 20, and 10 could be added. As to the proportion between the Queen's and Local European Regiments. The artillery should be wholly composed of troops raised for service in India, and consist of ninety-two troops and companies. The Cavalry should consist of three Royal Dragoon regiments, and of eighteen regiments on the reduced scale, composed of troops raised for service in India. The Infantry should consist of eighteen royal regiments of foot, and of fifty regiments on the reduced scale of troops entertained for the Indian service. To officer these 50 European and 30 native regiments, there will be be required

For the European regiments	50 Colonels	Total.
	50 Lieut.-Colonels	
	50 Majors	
	600 Captains	80 Colonels.
	600 Lieutenants	80 Lt.-Colonels.
	300 Ensigns	80 Majors.
For the native regiments	30 Colonels	780 Captains.
	30 Lieut.-Colonels	780 Lieutenants.
	30 Majors	420 Ensigns.
	180 Captains	
	180 Lieutenants	
	120 Ensigns	

The present establishment of officers of all ranks in the Bengal Infantry is—

78 Colonels,
80 Lieut.-Colonels,
80 Majors,
560 Captains,
880 Lieutenants,
400 Ensigns,

Therefore, to make up the required complement of officers on the new scales, there is a deficiency of—

2 Colonels,
220 Captains,
20 Ensigns,

and a surplus of 100 Lieutenants.

Considering, then, that the first 220 Lieutenants of Infantry in the list are officers from fourteen to eighteen years' standing, 1843 to 1850, with very few of so late a season as 1849 and 1850, it would not be unreasonable to promote them to the rank of Captain. If this be done, the measure will absorb 220 Ensigns, to be promoted to Lieutenants in their room.

The effect will be, on the whole, the promotion of—

2 Lieut.-Colonels to be Colonels,
2 Majors to be Lieut.-Colonels,
2 Captains to be Majors,
222 Lieutenants to be Captains,
122 Ensigns to be Lieutenants;

and the same number of Cadets, 122, will have to be supplied from England to complete the establishment. This would be no great drain.

The proportion of one European soldier to 4 natives should never be diminished.

Lord Harris, Governor of Madras, in his replies says. The Madras army is composed of Mahomedans, Brahmins and Rajpoots, Mahrattas, Telingas or Geutoos, Tamulians, Pariahs, &c. Mahomedans are drawn from all parts; Telingas chiefly from the

Northern Circars; Tamulians, &c, from Central and Southern Carnatic, Mysore, Ceded Districts, Madma, and Tinnevelly. No race, tribe, or caste has been excluded from enlistment by regulation. It has been an object to maintain a due proportion, so that no one caste should preponderate over another. With the sanction of Government, an order was published in December last, fixing the caste proportion as follows :—

One-fourth Tamulians of various castes from the Carnatic and Ceded Districts.

One-fourth Telingas and other Hindoo castes from the Northern Circars.

One-fourth Mahomedans from various parts.

One-fourth natives of lower castes, of without recognized caste.

Lord Elphinstone, Governor of Bombay, in his replies says the Bombay Army is chiefly composed of Concanees, Deccanees and Hindoostanees. We have three battalions of Beeloochees, and are raising two more; two battalions of Bheels, and are raising a third; and one corps of Kolies. All castes are professedly admitted, but most Commanding Officers have hitherto given the preference to the higher castes. The Concanees are chiefly from the Southern Concan; the Deccanees, from all parts of the Deccan; the Hindoostanees, from Oude and the neighbourhood of Cawnpore and Delhi; the Beloochees, from Sind and Beloochistan; the Bheels, from Khandesh, and the new corps from the hills of Guzerat; the Kolies, from the Nassick district. None are excluded by the regulations. In practice hardly any recruits have been hitherto obtained from Guzerat, and few from the Southern Mahratta country. The Bheels, Kolies, Beeruds, and other aboriginal tribes, are virtually excluded from the ranks of the regular army.

A precis of the replies received by Colonel Durand to the first series of questions follows :—

The general results of opinion as respects the strength of Europeans are as follows :—

——	Europeans.	Natives.
Major General Birch, ...	71,000	19,200
Major-General Sir W. Mansfield	50,000	30,000
To be reduced hereafter to	44,000	30,000
Colonel Mayhew	60,000	60,000
Sir J. Lawrence	54,600	136,500
Brigadier Genl. Chamberlain		
Lieutenant Col. Edwardes ...		
Major Genl. Sir S. Cotton ...	40,000 Infy.	60,000 Infy.
Brigadier-Genl. J. Jacob ...	20,000 Infy.	and Cavalry.

RETURN showing the RACES and CASTES of which the NATIVE ARMY was composed on April 1, 1858.

CORPS.	European Commissioned Officers.	European Non-Commissioned Officers.	Native Commissioned & Non-Commissioned Officers, and Rank and File.	NUMBER of each RACE and CASTE. Christians.	Mussulmans.	Brahmins.	Rajpoots.	Hindoos of inferior descriptions.	Seikhs.	Punjabees.	Hindoostanees.	Cis Sutledge.	Trans-Sutledge.	Hill Stations of Nepaul	Huzara Tribes.	Affghans.	Goorkhas.	Hill Men.	Mhairs.	Mhairats.	Bheels.	Morgeeahs, Grasseeans and other predatory tribes	Total.
Artillery	6	4	2,24	...	552	77	88	415	...	...	...	...	...	..	...	...	...	...	...	..	...	...	1,162
Light-Cavalry ...	26	3	1,259	25	624	314	231	35	...	...	...	...	...	...	...	..	...	...	...	..	..	..	1,259
Infy. (Regular) .	248	47	21,928	486	3,590	6 205	6,404	4,326	135	192	...	...	...	..	...	.	590	...	...	..		.	21,928
Infy. (Irregular)	240	29	42,715	20	1,853	1,532	2,911	3,821	3,504	15,286	896	2,270	2 867	358	23	82	271	3,677	566	915	803	22	41,82[illegible]
Cavy. (Irregular)	94	...	10,709	41	3,831	350	549	181	833	2,401	1,219	167	467	19	..	105	29	2	...	.	...	...	10,191
Arty. (Irregular)	10	6	99[illegible]	..	...	...	...	...	...	495	38	15	5	..	...	...	..	...	..	..	..	...	55[illegible]
Sebundy Sappers and Miners ...	1	2	209	...	2	18	179	10	...	...	...	...	...	...	..	..	...	...	..	...	...	...	209
Total	625	91	80,053	572	10,452	8,526	10,362	8,918	4,472	18 374	2,153	2,452	3 339	377	23	137	890	3,679	566	915	803	223	77,138

N. B.—Aggregate of Corps the Races of which are not shown in this Return 2,920

Grand Total .. 80,053

The Duke of Cambridge, in answer to the nine questions proposed by the Commissioners, says. I think that in the Bengal Presidency, irrespective of the police force to be established, one-third should be Europeans to two-thirds natives. For Bombay and Madras, I am disposed to think that one-fourth of the whole force should be Europeans. There should be 50,000 Europeans of all arms for Bengal, with a proportion of native troops to be decided by the Government of India. For Madras and Bombay 15,000 Europeans each, with a due proportion of natives. The force should be combined of both regulars and irregulars as regards the infantry, and of irregulars as regards the cavalry. There should be no native artillery in the Bengal army, but a certain number of gun lascars to every European troop or battery. The army should be composed of every description of nationalities and castes, and all should be as much as possible mixed up together; the Code requires considerable alteration. Every soldier should be enlisted for general service, and I would give greater power to commanding officers of regiments. The Bengal army should remain as at present, and not be further divided; but the Commander-in-Chief should have his head-quarters, if practicable, at a more central station than Calcutta; and I would introduce the system of corps d armées into the Bengal Presidency, to be commanded by Lieutenant-Generals, all being part of the same army, and under the undivided authority of the Commander-in-Chief. A change is required for Bengal, where hitherto the seniority system has prevailed. I would introduce the system of selection, as prevailing in Bombay, and which appears to have answered well. I would not introduce native gentlemen without passing through the ranks. There should be but one European army for the whole Empire including India. For the present a middle course must be adopted, which would give time for effecting the necessary change, would least disturb the present state of things, but would yet ultimately tend to complete fusion and amalgamation. I would therefore begin by at once forming a second regiment of artillery composed of the artillery of the three Presidencies; the battalions and brigades to be kept distinct as at present in their three Presidencies, but the whole of the officers being placed in one seniority list and the whole to be considered as one corps, without reference to be different Presidencies in which they may be serving. For the present this 2nd regiment would be employed in India only, but all the men to be enlisted henceforth for the corps, and all the officers to be appointed to it from the present time, should be so enlisted and appointed for general service, not confined exclusively to India. The officers for the 2nd regiment of royal artillery, to be appointed from the cadets who have passed through the mili-

tary college of Addiscombe. The various ranks of the officers to be assimilated to those of the royal artillery, and the establishments of men in troops, field batteries, and reserve companies, to be identical in both regiments.

I would in like manner deal with the corps of Engineers of the three Presidencies, forming out of this body a second regiment of royal engineers. It may be a matter for after consideration, whether this regiment should not have a more permanent local Indian character, as a large portion of this force, as regards the non-commissioned officers and men, must be composed of natives. It might therefore be desirable to look upon the second regiment of engineers as a local corps, but giving the officers of this corps full power to exchange with those of the first regiment of engineers, by which term I designate our present royal corps of this branch of the service.

As to cavalry the ten local regiments of 3 squadrons each should be formed into 8 regiments of 4 squadrons and 500 sabres, leaving the line regiments meanwhile at their present establishment. Those with 4 regiments of the line would give 6,800 sabres, about the estimate of Lord Canning and Sir W. Mansfield. The local regiments should be numbered in the line.

As to Infantry, the 12 local European regiments—6 in Bengal, 3 in Madras and 3 in Bombay—should also be numbered as line regiments, but to be employed for the present exclusively in India, though the men to be enlisted from henceforth should be for general service, the officers to be appointed from the Addiscombe cadets, and promotion to be by seniority. The establishment for an infantry regiment might in time of peace consist of 10 service companies of 900 rank and file, with two companies of 100 rank and file as a depôt. The infantry force would thus amount in Bengal to about 40,000 men. The Native Armies of the three Presidencies should be kept distinct, and looked upon in the light of auxiliaries to the European troops. Their number should be kept as low as possible. The officers composing the Bengal Army should be placed on one general list of seniority fixing the numbers of each grade and allowing them to go up from the Ensign to the Colonel save in a few exceptional cases, according to seniority. From this list the selections should be made for officers to the regular infantry regiments, the irregular cavalry and infantry regiments, the staff, both civil and military, the police corps, in short for all the various employments which have hitherto been open to the officers of the Indian army. Officers will equally have to be selected from the European corps for these various staff duties. The supernumerary officers of the late Company's army

for whom no employment can be found, and who are to be attached to the European regiments of the line, should be placed in this list to ensure their promotion. This general list will do away with the necessity for a staff corps. Some native corps should be ordinarily associated with every European regiment, both cavalry and infantry.

The two bodies would form a brigade under a well selected officer. Thus the brigade system, which is found so necessary on service, would be permanently established. Two European corps with two or more native corps combined, and having a detail of European artillery attached, would thus form a brigade, and a certain number of brigades thus constituted, and of various arms, would form a division, two or more divisions a corps d'armée, an arrangement which, for purposes of discipline and military organization, is quite indispensable in a large army such as that of Bengal ever must be. As regards the composition of this native army, it must be as mixed as possible, the cavalry wholly on the irregular principle, the infantry regular and irregular combined; and no native artillery, excepting possibly for a few localities where Europeans could not exist. The Commander-in-Chief in Bengal should still be so in India, but the superior officers of the Madras and Bombay armies should be denominated Commanders of the forces in these presidencies. The officers commanding the proposed three corps d'armée would greatly reduce the detail labours of the Commander-in-Chief. The whole of the stations of India, whether cantonments or garrisons, should be carefully revised. A small Committee of experienced departmental officers should be appointed to carve out the details of all these measures. About 90,000 Europeans —58,000 for Bengal, 19,000 for Madras, and 13,000 for Bombay—would be more than sufficient, with a proportionate number of native troops and police corps, to be decided upon by the local authorities. The number of Europeans to natives to be at the rate of two Europeans to five natives, inclusive of police, for Bengal; and about one European to three natives in the two other Presidencies.

Colonel Burlton dissents from the Resolution of the rest of the Commissioners on "the proportion of European to native force to be maintained in India," in so far as it affirms that the proportion should be "exclusive of Police Corps" in Bengal. In peace so large a native force is not only a useless expense, but a machine entailing further heavy outlay for its surveillance. In War "Quis custodiet custodes ipsos?" The police force will then be more dangerous than the regular disciplined army, being diffused over the whole country in one unbroken chain. With

50,000 European troops (including the Artillery) 40,000 Native Infantry, and 24,000 Native Cavalry, the Bengal Presidency would be securely and safely provided for, as far as human foresight can provide for any thing. It would be the better plan (for the Bengal army, at all events) to have only a certain number of regiments raised expressly for general service, including service on ship-board, instead of exacting from every recruit an engagement so generally repugnant, not merely to his prejudices, but, in the case of most of them, to his legitimate and honest feelings.

THE SIND FORESTS.

1858-59.

In forwarding to the Governor of Bombay, the Report on the Forests of Sind for 1858-59, by Mr. N. A. Dalzell, Forest Ranger, Sir Bartle Frere, Commissioner in Sind, characterises it as "by far the most clear and complete Report Government has yet had laid before it of this very important Department."

I. *Financial Statement.* The actual Forest Receipts for 1856-57 were Rs. 59,948-6-4, or a surplus over expenditure of Rs. 29,011-0-11 and not Rs. 59,948-6-4 as stated by Captain Hamilton, the former Ranger. The total actual Receipts of the Forest Department for the year 1858-59 will be Rs. 64,812 against Rs. 61,982-13-2 of the year 1857-58, showing a slight increase in favour of the present year of Rs. 2,829-4-9. More than one-half of the forest revenue consists of Grazing Fees in which there has been an increase of Rs. 7,744-5-11, caused by the want of rain in other parts of the country which drove great numbers of cattle into the forests.

The following is a tabular Comparative Statement of the Receipts for the two years under review :—

	1857-58.			1858-59.		
	Rs.	*A.*	*P.*	*Rs.*	*A.*	*P.*
Grazing Fees	27,213	2	7	34,957	8	6
Babool Pods	534	14	11	412	3	7
Firewood	3,877	3	8	11,926	6	4
Jow Wood	681	10	2	437	6	10
Grass sold	258	6	3	192	4	9
Fines	3,502	1	11	2,246	13	7
Fisheries	2,012	4	7	1,616	13	3
Charcoal	577	8	1	682	11	5
Honey	48	12	4	91	9	9
Lac	818	0	0	120	4	0
Building Wood	21,945	2	4	11,609	12	0
Miscellaneous	513	10	4	518	2	0
Total Receipts	61,982	13	2	64,812	0	0
Expenditure	30,646	0	7	39,584	8	10
Net Surplus	31,336	12	7	25,227	7	2

The net surplus of the year 1858-59 would have been much greater than is shown in the above table, but for the new arrangements made for the supply of fuel to the Indus Flotilla and other Steamers by the Forest Department, in preparing which considerable sums have been expended, and for which no return can yet be shown. At a cost of Rs. 600, thirty-five roads through the forests have been completed. In 1859-60 it is expected that the surplus will be Rs. 60,000, owing to the greatly increased demand now being made for fuel for the steamers and locomotives of the Railway and the Oriental Steam Navigation Companies, the demand for the former Company alone being five and a-half lakhs of maunds.

II. *Description of the Forests.* There are 74 forests under the management of the Forest Ranger in Sind, including an area of about 1,300,000 acres. In the Upper Sind forests, the Euphrates Poplar, a tree resembling the Willow both in the quality of its timber and its habit of growth, is the staple tree; Babool is scarce. One-half of these forests consist of this tree, the other half being Tamarisk, and gigantic grasses. In the Lowe

Sind forests, Poplar is rare, Babool being the staple tree, covering about one-half their area, one quarter being Tamarisk and Kimdee, and the remainder consisting partly of the same tall grasses, or of waste land out of the reach of the floods, and covered with a scrub of Salvadora, or Khubber, Kirrur or leafless Caper, and the Calotropis or Ak plant. In favourable circumstances the Babool grows to a maximum of 8 or 9 feet in circumference, but when left to nature it runs to jungle. The Poplar trees, on the contrary, are never crowded and require no care for their development.

III. *The Forests as producing Timber.* The Babool is adapted for all kinds of work requiring strength and solidity, and is now extensively used in the Dockyard at Kotree and the Government Arsenals. The inhabitants of the country do not purchase much, though the cost is only 6 annas per cubic foot. Small Babool rafters, however, for constructing the framework of their houses, are in such demand among them that the supply is not sufficient. The Bahn or Poplar is purchased in considerable quantities by them, 3,966 logs being sold in 1858-59. Of the young shoots no less than 150,000 were sold for rafters in the past year, against 10,708 in the preceding. This wood is less liable to be attacked by worms and dry rot than Babool. Like the Osier beds in England, when the Poplar has been cut down to the root, it will in a short time furnish a fresh crop of shoots for rafters. The supply of both Babool and Bahn is at present inexhaustible.

IV. *The Forests as producing Fuel.* Babool is best suited for fuel, but the Department is at present deficient in means to cut it up speedily and economically. The Tamarisk bush is at present chiefly used for the steamers. It is easily cut, sends up a four-yearly crop, and grows on ground impregnated with salt and saltpetre. Though it burns faster than Babool, it gives out more heat in a certain time; while it appears from certain experiments in France that the same weight of dry wood of every kind has the same heating power. But the demand is so great that the supply is becoming scanty. The average quantity required for the Indus Flotilla, of thirteen steamers, is 200,000 maunds per annum. The Railway Company requires nearly three times this quantity for their thirteen steamers and twelve locomotives, and the Oriental Steam Navigation Company about as much as the Indus Flotilla, making a total of 950,000 maunds per annum. There is no deficiency of material, but without the aid of steam saw-mills it will be impossible, especially in a country like Sind, to supply this large quantity by human labour. Experiments in the Dockyard at Kotree have shewn the truth of the fact that 2 tons of firewood are equi-

valent to 1 ton of coal. Wood fuel costs on the Indus 9 shillings per ton, so that steam navigation is carried on as if good coal were procurable at 18 shillings per ton. When it is taken into consideration that coal could not be laid down at the different fuel stations on the Indus under Rs. 35 to Rs. 40 a ton, it will be readily conceived what a valuable property the Sind forests are, and how necessary it is to preserve them, and to develop their resources under the most skilful and scientific method of treatment, both as regards the rapid growth of trees, and the most economical and expeditious means of bringing them into use. The fuel expenses of the Indus Flotilla alone, by using English coal, would amount to nearly one-and-a-half lakhs of Rupees per annum, but by using wood from the forests, the same effects are produced by an expenditure of Rs. 32,000 only.

V. *The Management of the Forests in a Physiological point of view.* Thinning and pruning are the two operations most necessary in the culture of forests. For want of these the dense belts of natural Babool have come to a stand-still long before they have attained the maximum of their development. The Tuppedars, misunderstanding the instructions given for the delicate operation of pruning, have reduced many promising young trees to bare poles.

VI. *Replacement of Trees in the Forests.* At least 5 young trees ought to be planted for every one cut down to compensate for waste. The forests have hitherto suffered so little from the constant demands made on them, owing to the bounty of nature. All the young forests of Tamarisk on cutcha land are due to the natural dispersion of seeds. The most economical method of growing young trees appears to be by ploughing lines in the ground immediately after the water has subsided, and sowing the seed in the furrows thus made. There are now about 400 beegahs covered with seedling trees.

VII. *Irrigation of the Forests.* Situated on the banks of the Indus they are, generally speaking, submerged for 3 months every year during the inundation. But there are large tracts, once inundated and now dry, whose trees are dead and leafless. The canals drain off water so that the inundation does not rise so high as before. Their increase, and especially the opening of the one from Roree of vast dimensions, will probably so lower the main stream as to convert living forests into scenes of desolation. The forest land is so high that the cutting of water courses has proved almost useless.

VIII. *The Natural Enemies of Forest Trees* are the porcupine, the wild pig, the goat, and especially the camel whose favourite food is the Babool. All camels must be excluded from the forests.

IX. *Government Gardens* at Kurrachee, Hydrabad, Tarrooshah, Shikarpore and Mecanee, were visited during the year. The soil of the first is impregnated with salt. The number of species of trees and shrubs is small, and no valuable plants should be entrusted to it, but herbs and esculent vegetables succeed very well. It is a place of pleasant recreation. The expense of the Hydrabad garden is met by the mango fruit. Vines, which produce nothing, grow in its densest shade. There was a small patch of oats in the ear, very vigorous and healthy. There is no reason why Sind should not have fields of oats as well as of barley and wheat. The garden at Tarrooshah is the best and most promising in Sind; everything seems to thrive in it, not only European forms, but also the Deccan plants. Here grow the bel-fruit, so famous in Bengal for the cure of dysentery, and the Talmalia Heptaphylla, an Indian medicinal tree, observed nowhere else; also the Carob tree, the only one in Sind, except that at Meeanee. The garden at Shikarpoor is large, well situated, and with abundance of excellent water; but it contained nothing worth notice, and seemed neglected. Young Tallee trees have been planted out in the Mecanee garden, and the Loharree tree introduced. All these gardens should be maintained for the introduction of useful species of plants from all parts of the world. When it is advisable to grow vegetables for European troops, more ground will be required.

CASES IN THE MADRAS POLICE OFFICES.

1858.

On the 17th of May, 1859, Colonel J. C. Boulderson, the Commissioner of Police forwards eleven statements which illustrate the operations of the Police during 1858. In 1857 the number of cases put up for trial was 16,168, and the number of persons arraigned 21,352, while in the latter, the number of cases is 17,736, and the number of persons 21,094. This shews an increase of the number of cases by 1,568, and a decrease of the number of persons by 258, which is in a great measure accounted for by the increase of the number of petty cases, and of breaches of Police discipline, over 1857. The number of Cases committed for trial to the Supreme Court is 56, against 70 in 1857; the remainder of the Cases (Police excepted) were disposed of by the Magistrates. To relieve the Magistrate of the Town Police Court, a fourth Magistrate was appointed. In

October 1858 the Force was augmented by the addition of a Marine Police branch, to prevent the depredations of boatmen when afloat. "Since the organization of the force," the Chamber of Commerce says, "no complaints have been laid against the boatmen for plundering the goods entrusted to their charge."

The only cause for anxiety during the year arose out of conversions from Heathenism to Christianity, of which three cases occurred in Town and one in Royapettah. The latter gave rise to a trial in the Supreme Court, and to animadversions on the negligence of the Police on the occasion. The former, (one of which was the cause of great excitement in the Town) by the judicious conduct of the superior officers of Police, were brought to a peaceable termination. With the above exceptions, the past year was one of peace and quiet throughout Madras.

The Mortality Return shews that 10,473 deaths were registered, which, taken against 9,445 in 1857, shews an increase of 1,028.

Number of Deaths within the jurisdiction of the Supreme Court of Madras from 1st January to 31st December 1858.

Months.	Males.	Females.	Children under 12 years.	Total.	Cholera Cases.
January.....1858	340	335	294	969	370
February ..... „	307	287	268	862	307
March..... „	304	294	300	898	267
April..... „	235	236	284	755	88
May..... „	272	259	304	835	115
June ..... „	244	244	268	756	77
July ..... „	254	268	258	780	76
August..... „	269	259	361	889	108
September..... „	293	302	283	878	129
October..... „	296	244	299	839	128
November..... „	299	275	307	881	134
December..... „	379	357	395	1,131	248
Grand Total.....	3,492	3,360	3,621	10,473	2,047

Charges were made against 1,563 Police Officers, of which 972 were for neglect of duty, 70 for Drunkenness, 261 for Misdemeanour and 16 for Disobedience. Of these 187 were acquitted, 1351 fined, 21 dismissed the service and 4 reduced. Of Coroner's Inquests 227 were held, which is 52 in excess of 1857.

General Statement of Cases summarily disposed of by the Magistrates and those committed for trial to the Criminal Quarterly Sessions in Her Majesty's Supreme Court of Judicature at Madras, from the Royapett, Town and Vepery Police Courts, during the year 1858.

Charges.	Number of cases.	Number of persons sentenced to death.	Number of persons transported.	Number of persons sentenced to hard labor.	Number of persons imprisoned.	Number of persons flogged.	Number of persons fined.	Number of persons dismissed from the service.	Number of persons acquitted or dismissed.	Number of persons sent on board.	Number of persons reduced.	Total number of persons.
Murder	1	...	...	...	...	...	...	...	2	...	...	2
Manslaughter	2	...	...	...	...	...	...	...	5	...	...	5
Burglary	1	...	...	1	...	...	...	...	...	...	...	1
Administering poisonous substance with intent to kill	...	...	...	...	...	...	...	...	...	...	...	...
Shooting with intent to murder	1	...	1	...	...	...	...	...	...	...	...	1
Cutting and wounding with intent to murder ...	...	...	...	...	...	...	...	...	...	...	...	...
Rape	1	...	1	...	...	...	...	...	...	...	...	1
Perjury	...	...	...	...	...	...	...	...	...	...	...	...
Sodomy	...	...	...	...	...	...	...	...	...	...	...	...
Instigating rebellion	2	...	2	...	...	...	...	...	...	...	...	2
Assault with intent to commit rape	1	...	...	...	...	...	...	...	1	...	...	1
Crimping	4	...	...	1	...	...	...	...	4	...	...	5
Forging and Uttering	5	...	...	2	...	...	...	...	...	...	...	2
Aggravated assault (and robbery)	1	...	...	...	...	...	...	...	3	...	...	3
Assaults	4,435	...	...	49	...	8	1,114	...	2,661	...	...	3,832
Conspiracy	2	...	...	...	...	...	...	...	2	...	...	2

Embezzlement or breach of trust	109	...	...	27	...	1	...	...	77	...	...	105
Aiding and abetting in assault cases	...	...	...	...	...	...	...	...	...	...	...	...
Larceny under 50 Rupees	1,143	...	...	495	...	369	3	...	560	...	...	1,427
Larceny	23	...	7	17	...	...	...	...	8	...	...	32
Accessories	...	...	...	...	...	...	...	...	...	...	...	...
Stealing from the person	6	...	...	3	1	...	...	...	1	...	...	5
Riot and assault	1	...	...	...	3	...	...	...	6	...	...	9
Conspiracy and obtaining under false pretences ...	3	...	..	5	...	...	...	...	...	...	...	5
Attempting to steal property under 50 Rupees ...	7	...	...	4	...	2	...	...	1	...	...	7
Attempting to obtain property by false pretences under 50 Rupees	78	...	...	25	...	...	...	...	64	...	...	89
Obtaining by false pretences	1	...	...	1	...	...	...	....	...	...	...	1
Embezzling cargo merchant shipping Act of 1854 and Act No. XXVIII. of 1858	1	...	...	2	...	...	...	...	1	...	...	3
Stealing growing plants and vegetables	53	...	...	13	...	5	32	..	18	...	...	68
Reputed thieves	44	...	...	29	...	1	2	...	27	...	...	59
Unlawful or malicious destruction of property ...	39	...	...	1	...	...	18	...	30	...	...	49
Uttering counterfeit coin	3	...	...	...	...	...	...	...	4	...	...	4
Having in possession, purchasing or receiving stolen goods	109	...	...	30	...	13	1	...	87	...	...	131
Abduction or unlawful detention of a woman or female child	35	...	...	8	...	...	2	...	35	...	...	45
Threatening to assault	1	...	...	...	...	...	...	...	1	...	...	1
Mutinous or disorderly conduct	..	...	...	...	...	...	...	...	...	...	...	...
Attempting to do some bodily harm or injury ...	1	...	...	...	...	...	...	...	3	...	...	3
Aiding and abetting in stealing goods under 50 Rupees value	13	...	...	6	...	2	...	...	11	...	...	19
Aggravated assault	13	...	...	17	...	...	1	...	6	...	...	24
Taking forcible possession of property	7	...	...	...	...	...	...	...	8	...	...	8
Found in possession of stolen property without satisfactorily accounting for the same	136	...	...	45	...	4	20	...	119	...	...	188
Carried forward,	6,282	...	11	781	4	405	1,193	...	3,745	...	...	6,139

General Statement of Cases summarily disposed of by the Magistrates, &c.—(Continued.)

Charges.	Number of cases.	Number of persons sentenced to death.	Number of persons transported.	Number of persons sentenced to hard labor.	Number of persons imprisoned.	Number of persons flogged.	Number of persons fined.	Number of persons dismissed from the service.	Number of persons acquitted or dismissed.	Number of persons sent on board.	Number of persons reduced.	Total number of persons.
Brought forward,	6,282	...	11	781	4	405	1193	...	3,745	...	...	6,139
Tresspass into dwelling houses without satisfactory excuse or on public (and on Government ground and removing soil)	435	...	...	4	...	...	264	...	230	...	...	498
Attempting to commit suicide	...	...	...	...	...	...	...	...	...	...	...	...
Receiving stolen property	...	...	...	6	...	...	...	...	5	...	...	11
Purchasing property from children under the age of 14 years	4	...	...	...	...	...	3	...	1	...	...	4
Assaulting or resisting Police officers in the execution of their duty	252	...	...	20	...	...	242	...	144	...	...	406
Wrongful appropriation of property found	6	...	...	1	...	1	...	...	4	...	...	6
Continued wilful disobedience to lawful commands ...	36	...	...	76	...	...	...	...	2	1	...	79
Refusing to go on board and to proceed on voyage. Merchant Shipping Act of 1854 and Act XXVIII. of 1858	10	...	...	59	...	...	...	...	8	3	...	70
Refusing permission to see a Magistrate. Merchant Shipping Act of 1854 and Act No. XXVIII. of 1850	1	...	...	...	...	...	...	...	1	...	...	1
Continued wilful neglect of duty. Merchant Shipping Act of 1854 and Act No. XXVIII. of 1850	2	...	...	14	...	...	...	...	2	...	...	16
Secreting themselves on board without the knowledge of the master	...	...	...	...	...	...	...	...	...	...	...	...

Breach of the peace, riotous behaviour, &c. ...	2,807	...	...	27	...	1	3,859	...	1,490	...	...	5,377
Disturbing religious ceremonies	3	...	...	...	...	...	3	...	...	...	...	3
Gambling	132	...	...	3	...	2	217	...	146	...	...	368
Keeping gaming houses	8	...	...	3	...	...	18	...	2	...	...	23
Keeping brothels	...	...	...	...	...	...	...	...	...	...	...	...
Stealing animals	1	...	...	...	...	...	...	...	1	...	...	1
Wilful disobedience to lawful commands (Merchant's Shipping Act of 1854 and Act No. XXVIII. of 1850)	15	...	...	27	...	...	...	...	1	8	...	36
Refusing to maintain wife and children	523	...	...	9	...	...	144	...	205	...	...	358
Having in possession false weights and deficient measures	13	...	...	...	...	...	10	...	4	...	...	14
Drunkenness	512	...	...	2	...	1	448	7	87	...	4	549
Riding or driving furiously along the public roads and without lights	658	...	...	1	...	1	560	...	125	...	...	687
Playing country music without a license ...	63	...	...	...	...	...	38	...	47	...	...	85
Obstructing the public roads	378	...	...	...	...	...	262	...	163	...	...	425
Begging in the public roads	26	...	...	5	...	...	...	...	21	...	...	26
Corruption by Police officers	6	...	...	2	...	...	1	...	5	...	...	8
Suit for wages (Seamen)	...	...	...	...	...	...	...	...	...	...	...	...
Owners failing to have boats in readiness without a reasonable excuse	...	...	...	...	...	...	...	...	...	...	...	...
Demanding a rate of hire beyond that authorized by the Boat Act No. IV. of 1842	1	...	...	...	...	...	...	...	1	...	...	1
Landing grain beyond the special limits Boat Act No. IV. of 1842	7	...	...	...	...	...	2	...	9	...	...	11
Using boats without license	...	...	...	...	...	...	...	...	...	...	...	...
Overloading (Boat Act No. IV. of 1842) ...	8	...	...	...	...	...	8	...	29	...	...	37
Misdemeanor	275	...	...	...	...	...	261	2	38	...	...	301
Corruption	13	...	...	...	...	...	7	6	3	...	...	16
Disobedience	21	...	...	...	...	...	16	...	5	...	...	21
Contempt in the Police Court	5	...	...	...	...	...	5	...	...	...	...	5
Carried forward,	12,503	...	11	1,040	4	411	7,561	15	6,524	12	4	15,582

General Statement of Cases summarily disposed of by the Magistrates, &c.—(Continued.)

Charges.	Number of cases.	Number of persons sentenced to death.	Number of persons transported.	Number of persons sentenced to hard labor.	Number of persons imprisoned.	Number of persons flogged.	Number of persons fined.	Number of persons dismissed from the service.	Number of persons acquitted or dismissed.	Number of persons sent on board.	Number of persons reduced.	Total number of persons.
Brought forward,	12,503	...	11	1,040	4	411	7,561	15	6,524	12	4	15,582
Wilful neglect of duty (Boat Act No. IV. of 1842) ...	7	...	...	...	...	11	...	...	28	...	...	39
Neglect of duty (Police officers)	990	...	...	...	...	...	973	6	122	...	...	1,101
Refusing to work	...	...	...	...	...	...	...	...	...	...	...	...
Desertion Boat Act No. IV. of 1842 and Merchant Shipping Act of 1854 and Act No. XXVIII. of 1850 ...	39	...	...	71	...	9	...	...	9	2	...	91
Allowing prisoners to escape	10	...	...	...	...	...	8	...	3	...	...	11
Discharging guns or fireworks in or near the public street	9	...	...	...	...	...	3	...	6	...	...	9
Escaping from legal confinement	2	...	...	1	...	...	...	...	1	...	...	2
Nuisance	3,066	...	...	...	...	18	2,729	...	332	...	...	3,079
Taking spirits into barracks or jails	3	...	...	1	...	...	1	...	1	...	...	3
Purchasing regimental clothing &c., from Soldiers ...	...	...	...	...	...	...	...	...	...	...	...	...
Embezzlement	1	...	...	...	...	...	...	...	1	...	...	1
Poisoning cattle	2	...	...	1	...	...	...	...	2	...	...	3
Using indecent and threatening language in the public streets, &c.	35	...	...	...	...	...	20	...	29	...	...	49
Letting loose ferocious animals	4	...	...	...	...	...	...	...	1	...	...	1

Keeping taverns, &c., (or chandoo shops) without license from the Commissioner of Police ...	2	...	...	...	...	...	...	...	2	...	...	2
Breaches of such license	1	...	...	...	...	...	1	...	...	...	...	1
Absconding by Apprentices, Act XIX. of 1850 ...	5	...	...	5	...	...	...	...	...	...	...	5
Affixing placards	3	...	...	...	...	...	2	...	2	...	...	4
Affixing paper upon a wall without permission of owner	...	...	...	...	...	...	..	...	...	...	...	...
Ill-treating animals	247	...	...	...	...	...	212	...	35	...	...	247
Leaving carts (or animals) without control ...	44	...	...	...	...	...	33	...	15	...	...	48
Found after sun set armed with dangerous weapon ...	1	...	...	1	...	...	...	...	...	...	...	1
Selling obscene books	1	...	...	...	...	...	1	...	...	...	...	1
Indecent exposure	18	...	...	...	...	...	12	...	6	...	...	18
Preferring charges without sufficient grounds ...	44	...	...	...	...	...	43	...	1	...	...	44
Failing to prosecute without sufficient reason after making complaint of an offence	2	...	...	...	...	...	1	...	...	...	...	1
Violation of duty by Police officers ...	11	...	...	4	...	...	3	...	7	...	...	14
Breach of the Abkary Act XIX. of 1852	25	...	...	...	...	...	22	...	8	...	...	30
Breach of the Post office Act No. XVII. of 1854 ...	1	...	...	...	...	...	3	...	...	...	...	3
Breach of the Railway Act No. XVIII. of 1854 ...	2	...	...	...	...	...	...	...	3	...	...	3
Breach of the Conservancy Act No. XIV. of 1856 ...	538	...	...	...	...	...	216	...	333	...	...	549
Breach of the Wheel Tax Act No. XXVI. of 1856 ...	98	...	...	...	...	...	58	...	40	...	...	98
Breach of the Marine Police Act No. XXVIII. of 1858	11	...	...	...	...	26	8	...	9	...	...	43
Breach of the Arms Act No. XXVIII. of 1857 ...	9	...	...	1	...	...	5	...	3	...	...	9
Breach of the Section 13 of Act No. XII. of 1851 respecting land revenue of Madras	1	...	...	...	...	...	1	...	...	...	...	1
Breach of the Act No. VI. of 1857 regarding the acquisition of land for public purposes	1	...	...	...	....	...	...	...	1	...	...	1
Total	17,736	...	11	1,125	4	475	11,916	21	7,524	14	4	21,094

On 23rd July 1859 the Madras Government reviews the Statement of Cases, and with reference to Colonel Boulderson's use of the phrase "conversions from Heathenism to Christianity" says;—"The Commissioner will be informed, for his guidance, that the employment in public correspondence of the term *Heathenism*, as synonymous with *Hinduism*, has been proscribed."

MADRAS PUBLIC WORKS
1857-58.
Madras Records No. LIX.

On the 16th December 1858, the Officiating Chief Engineer submitted the Report of the operations of the Department of Public Works for 1857-58. In the Budget of 1857-58 a sum of Rupees 64,19,784 was entered as the probable Expenditure that would be required to be made during the year for works of every description inclusive of Repairs, but owing to the restrictive orders of the Government of India the actual outlay amounted to only Rupees 40,87,025, viz. Rupees 20,72,795 on account of New Works, and Rupees 20,14,230 for Repairs, the whole falling short of the Estimate by more than 23¼ lakhs of Rupees.

This Expenditure was on account of

	New Works. Rs.	Repairs. Rs.
I. Irrigation Works	4,38,108	12,70,658
II. Communications	4,99,080	5,34,757
III. Buildings	11,38,607	2,08,817
Rupees ...	20,72,795	20,14,230

Under the first head the chief Expenditure incurred for the construction or extension of Irrigation Works, or the repair of existing ones, was in the undermentioned Divisions and Districts.

	New Works. Rs.	Repairs. Rs.
Ganjam	2,712	26,278
Godavery Division	1,52,286	3,05,077
Kistnah Division	82,166	1,23,807
Nellore	30,561	1,17,747
Cuddapah	20,384	35,422
Bellary	1,889	80,182
Chingleput	5,828	41,445
North Arcot	73,121	34,920
South Arcot	13,131	70,981
Tanjore	3,479	1,05,965

Trichinopoly	25,492	76,681
Madura	185	52,270
Tinnevelly	11,036	50,773
Coimbatore	14,426	29,366
Salem	803	42,128

The second head comprized the following communications.

	New Works. Rs.	Repairs. Rs.
Roads and Bridges	4,01,287	5,06,104
Navigable Canals	64,879	22,493
Ports and Harbours	29,142	3,396
Ferry Boats	772	2,764
Total	4,96,080	5,34,757

The great bulk of the Expenditure was on account of Roads and Bridges.

	New Works. Rs.	Repairs. Rs.
Ganjam	35,304	18,992
Nellore	26,061	40,910
Bellary	4,095	50,826
Kurnool	38,853	11,439
Chingleput	46,191	86,664
North Arcot	56,263	46,538
South Arcot	25,787	37,568
Tanjore	30,903	7,804
Coimbatore	16,169	38,644
Canara	17,501	40,204

Under the head of Buildings the large disbursements appear in Bellary, Chingleput, Coimbatore, Madras and Hyderabad. The classification of the total Expenditure for Buildings is as follows:

	New Works. Rs.	Repairs. Rs.
Military ...	9,84,615	1,18,926
Revenue ...	21,977	27,494
Public ...	50,966	32,954
Judicial ...	57,041	21,861
Ecclesiastical ...	7,693	6,607
Marine ...	13,501	686
Educational ...	2,814	289
	11,38,607	2,08,817

No new works of any magnitude were carried on during the year, whose effect on the improvement of the country deserves special mention. A large share of attention was devoted to

the two kinds of works most conducive to the benefit of the country, viz. Irrigation Works and Roads and Bridges. As regards the first, that in the Godavery and Kistnah Divisions; and in the Districts of Nellore, Cuddapah, North and South Arcot, Trichinopoly, Tinnevelly and Coimbatore, there was considerable expenditure for the improvement or extension of works, as well as for repairs; while in the Districts of Ganjam, Bellary, Chingleput, Tanjore, Madura and Salem, the outlay was chiefly, if not almost wholly, for repairs. In the Godavery Division where the expenditure exceeded 4½ lakhs, the principal works were the Weyaroo Canal; the Samulcottah and Toonee Canal; the Samulcottah and Cocanada Canal; some Irrigation and Drainage Channels, and other works connected with the Godavery Annicut. The large expenditure in repairs was chiefly for the repair of the breach in the Annicut. In the Kistnah Division the principal works were the Northern and Southern high level Channels, and the Channel from the Poolairoo to the Canal Basin at Masulipatam, besides others of less note. The Expenditure on Repairs was for Irrigation Works, connected chiefly with the extension and development of the system dependent on the Kistnah Annicut.

The Hurricane of November 1857 did much injury to the works in Nellore and Cuddapah, and led to large expenditure in both Districts for Repairs. The great bulk of the expenditure in North Arcot was incurred on account of the Palar Annicut, and its subsidiary works, and for repairs to other works. The expenditure in other Districts was necessitated by the circumstances of the season, as in the case of Tanjore where the Irrigation Works sustained considerable injury from the Monsoon of October 1857 and led to an expenditure which in all amounted to Rupees 1,65,965; as also in Trichinopoly where the rains of November and December 1857, caused considerable damage.

The Paumbem Channel was further improved during the year by the removal of 7,120 cubic feet of stone and of 9,285 cubic feet of sand, at a total expenditure of 9,104 Rupees. The Channel with its rapidly increasing traffic is slowly but steadily advancing to the attainment of the general depth of thirteen feet shewn to be practicable and strongly recommended by Colonel A. Cotton in 1854.

The communications in the Provinces shared in the damages sustained by the Irrigation Works, and large disbursements were made for their repair. The expenditure on Roads and Bridges was general, but the largest was in Chingleput and North Arcot, the amount expended in each exceeding, both for New Works and repairs, a lakh of Rupees.

On Buildings the chief expenditure was on account of those

appertaining to the Army and comprizes several Military Works at Saint Thomas' Mount; Rupees 3,15,994 for the Jackatalla Barracks on the Neilgherries; and Rupees 3,60,570 for the Hyderabad Barracks.

Tables follow which shew the traffic from the Northward by Cochrane's Canal:—

	Boats.	Tons.	Toll. Rs. As.
1856 57.....	9,287	1,05,467½	26,366-14
1857-58.....	9,324	1,29,643	32,410-12
Increase in 1857-58	37	24,175½	6,043-14

The chief items which contributed to the traffic of the year were the following:

	Boats.	Tons.	Toll. Rs. As.
Chillies.....	180	2,239	559-12
Firewood.....	1,341	27,905	6,976-4
Jungle sticks.....	14	200	50-0
Passengers.....	2,002	2,062	515-8
Paddy.....	49	624	156-0
Red-wood.....	25	605	151-4
Shells.....	1,473	23,142	5,785-8
Salt-fish.....	228	469	117-4
Salt.....	2,415	54,585	13,646-4
Wood.....	701	14,524	3,631-0
	8,428	1,26,315	31,588-12
Other commodities.			
	9,324	1,29,643	32,410-12

The Statement to exhibit the work of the Lithographic Department shews that, between the 1st May 1857 and 30th of April 1858, the number of copies and of impressions struck off and supplied to public Offices was as follows:

	Copies	Impressions.
Maps and Drawings.....	39,228	47,438
Circulars, Forms, &c.....	1,70,444	1,04,200
	2,09,672	1,51,638

The cost of this Press was Rupees 18,868, and the value of the work, estimated at rates which the Officiating Chief Engineer considers rather low, at Rupees 16,781. The Government are satisfied with the results of the Lithographic Department. In their Minute on the Report dated 23rd March 1859, the Government say it does not meet the orders for brevity and perspe-

cuity specially enjoined in the case of the Administration Report. To meet the requirements at once of the Local and Supreme Governments, it is recommended that the Annual Report for the Local Government be first prepared; and from it the briefer Administration Report could be condensed.

REPORT OF THE

CALCUTTA MUNICIPAL COMMISSIONERS.

1858.

On the 15th March 1859, the Municipal Commissioners for the Town of Calcutta gave in a report to the Lieutenant Governor of Bengal of the result of their labours during 1858, the second year of their incumbency. The total assets during the year, amounted to Rs. 8,30,105-3-0 against an expenditure of Rs. 7,56,093-14-5, leaving on the 31st of December a balance of Rs. 74,011-4-7 in the Bank of Bengal. On comparison with the total receipts during the year 1857, there is an apparent increase of Rs. 1,67,690-0 4. But this increase is reduced to an actual sum of Rs. 72,486-13-8, the rest being money received from a native for the construction of a new street, and the proceeds of Government Promissory Notes for the purchase of Dunkin Bustee &c. This increase was chiefly derived from the different rates and taxes in consequence of the revised valuation and assessment of the town, and of outstandings of the previous year.

The total disbursements during the past year, amounted to

Rupees	7,56,093	14	5	but include,
"	1,48,070	5	4	set apart on new Drainage account.
"	30,094	9	9	do. Water supply account.
Total Rs.	1,78,164	15	1	so that in fact the *bonâ fide* expenditure was only Rupees 5,77,928-15-4 showing an excess of Rupees 1,10,049-13-8 on comparison with the year 1857.

Leaving out a sum of Rs. 1,73,700, invested in Government Promissory Notes, which constitutes the funded capital of the Department, the sums actually available for the 1859 are as follows: —

Rs. 53,044-12 11, for general Conservancy purposes.
" 20,931-10- 1, for the extended illumination of the town.

The amount of *House Assessment* bills for 1858 was Rupees 4,99,013, which is an increase on 1857 of Rs. 12,906. This brings up the city rental to Rupees 66,53,513 5-4, which, on assuming that landed property is generally considered to yield a net return

of 6 per cent. per annum, establishes the value of all taxable property within the precincts of the town at *eleven crores, eight lakhs and ninety-two thousand Rupees*, so that if the value of buildings exempted from taxation be added thereto, the whole of the landed property within Calcutta may be estimated at twelve crores of Rupees or twelve million pounds sterling. The means prescribed by the Legislative for realising the House Rate are ineffectual. The amount collected by *process* during the past year was Rupees 10,132-6-7, against Rupees 7,085-8-3, thus exhibiting a fearful increase of nearly 45 per cent.

The total amount of bills on account of the *Lighting Rate* for the year 1858 is Rupees 1,21,374-14-6, against Rupees 1,19,117-0-6 for the previous year, showing an increase of Rupees 2,257-14-1. The amount realised by process, is Rupees 5,825-8-9 against Rs. 2,019-10-0 in 1857, or one hundred and forty per cent. more. For the illumination of the city by Gas and Oil Rs. 69,135 were expended. The number of lamps actually put up at the close of December last was, one thousand three hundred and thirty-seven, of which 469 were lighted by gas and 868 by oil.

The financial result of the *Carriage and Horse Tax* is unsatisfactory. Several native stable-keepers removed their establishments beyond the jurisdiction, and hence there was a decrease of Rs. 3,008, the total amount of bills being Rs. 89,209. A sum of Rs. 38,945 is still unrealised. The remissions granted amounted to Rs. 3,694, more than three times the sum for the previous year. The total amount collected was Rs. 77,850 at an expense of *fourteen per cent.* for establishment.

The income derived from granting *Licenses* for various purposes, as well as for registry fees, was as follows:—

Building Licenses,	Rs.	1,293	0	0
Fishing Ditto,	"	922	4	0
Tattees Ditto,	"	877	8	0
Illumination Ditto,	"	151	0	0
Grass-cutting Ditto,	"	111	0	0
Shop registry fees	"	498	4	0
Total,	Rs.	3,853	0	0

There is an increase of Rs. 3,400 in the amount of *Fines*, the total being Rs. 6,353.

The total amount of rates and taxes levied upon the inhabitants during the past year was as follows:—

House Rate,	Rs.	4,99,013	14	10
Carriage and Horse tax,	"	89,209	8	0
Lighting rate,	"	1,21,374	14	6
Total,	Rs.	7,09,598	5	4

which have been in round numbers apportioned in the following manner:

To be set apart for new Drainage,.....	Rs.	1,50,000
Do. water supply,.....	"	30,000
Lighting the town by gas and oil and providing lamps, &c.,	"	1,20,000
Conservancy of the town,.....	"	1,26,000
Roads,.....	"	93,000
Watering streets,.....	"	25,000
Drain and bridges,.....	"	10,000
City improvements,.....	"	55,000
Establishments, remissions, unrealisable bills and contingencies,	"	1,00,000
Total,	Rs.	7,09,000

To obtain building sites, to clear out native nuisances from the midst of the European quarter, and to have room for an additional tank, the Commissioners brought a cluster of native huts in Chowringhee known as Dunkin Bustee, for Rs. 45,000. For the tank Rs. 20,707 of this were allowed, and for Road improvement 2,451, while Rs. 27,427 were realised for four building lots, leaving a clear profit to the town of Rs. 5,357. A second cluster, Money Bustee, was bought for Rs. 42,000. There have been frequent complaints from the natives that their division of the town (the Northern) has little attention given it. Notwithstanding the fact that to effect any great improvement of permanent utility in the native town of Calcutta, is almost an impossibility, for what can be effected in the Southern Division by tens of thousands, must in the Northern be almost calculated by lakhs, the sum expended for the repairs of roads was 33 per cent. in excess of that laid out for the Southern or European division. This is true of improvements of a permanent nature also.

In 1849 there were in the town of Calcutta, and within the jurisdiction of the Commissioners,—

5,918 one storied buildings.
6,438 two storied do.
721 three storied do.
10 four storied do.
1 five storied do.

in all 13,088 pucka buildings, besides
48,312 huts, aggregating

51,400 habitations of every description, exclusive of places of public worship. In 1858, or nine years afterwards, and

according to the assessment books now kept, the number of buildings was as follows:

6,129 one storied buildings,
6,497 two storied do.
725 three storied do.
11 four storied do.
1 five storied do.

Total, 13,363, thus proving the fact, that in the course of whole nine years, the aggregate increase to habitations of every description, was

212 one storied houses,
59 two storied do.
4 three storied do.

Total, 275 buildings of every description.

This shews a want of public enterprise so far as houses are concerned. But there is a considerable increase in huts. In 1849, according to Mr. Simm's report, there existed 48,312 huts, but at the close of the past year, the Conservancy books show 56,891 to be within the limits of the jurisdiction, thus establishing an increase of 8,579 huts; an increase in spite of the periodical destruction of huts during the conflagrations. The increase chiefly relates to the Northern Division, where the value of ground is very considerably above that in the Southern Division. Of Public Buildings there are

14 Protestant Churches.
5 Roman Catholic ,,
1 Chinese ,,
1 Greek ,,
1 Armenian ,,
1 Synagogue ,,
1 Parsee ,,
47 Mahomedan Mosques
154 Hindoo temples.

This shews a decrease of one Protestant Church which fell in, and of 13 Hindoo temples gone to decay. In 1849, there were eight public squares in the Southern and three in the Northern Division of the town, occupying an area of 15,33,543, and 5,01,700 feet respectively. To these during an interval of nine years, no addition has been made whatever. The total length of streets, and thoroughfares in 1849, was

Northern Division, length 3,50,803 feet, area 1,01,15,996 feet.

Southern do., ,, 2,28,695 ,, ,, 9,649,619 feet, from which it follows, that whilst the Northern Division is

spread over double the extent of ground which the Southern occupies, the aggregate length of streets was only about one-third more. Considering moreover the respective number of inhabitants of each Division, the necessity of opening additional thoroughfares, both as means of ventilation and as an incitement to local trade, becomes not only apparent but absolutely imperative. Whilst not *one single* lane, street or thoroughfare has been opened in the Southern Division, eight streets aggregating 3,089 feet in length, and 2,16,254 feet in area, have been either opened or widened in the Northern.

Native gentlemen are averse to laying out money for the improvement of their own property. Although there are thousands of them who possess almost every luxury which money can procure, only twelve had, up to 31st December last, adopted gas-lights in their houses. The actual area of ground occupied by buildings subject to taxation is 7,360 biggahs in the Northern, and 3,129 biggahs in the Southern Division, which is taken up by 13,366 puckha or masonry houses, and 41,917 tiled or straw huts in the former, and 3,538 puckha houses and 14,974 huts in the latter, thus establishing the fact, that whilst the ground constituting the Northern Division is little more than twice the extent of that of the Southern Division, the proportion of puckha buildings is nearly 4 to 1 whilst that of huts is about 3 to 1. The great disproportion is in puckha houses. It must moreover be remembered, that whilst the value of ground in the Southern Division ranges from 25 to 1,250 Rs. per cottah, its established value in the Northern Division is from Rs. 25 to 3,000 per cottah. Whilst the Southern Division yields Rupees 2 35,000 in the return of House Rate, the Northern Division, spreading over more than double the extent of area, containing four times the number of houses, and three times that of huts, and the average value of ground of which to say the least is three times of that in the other division, it after all produces only Rupees 2,70,000 from the same source. Houses in the Southern Division, where Europeans reside, will always let at a much higher rate, than dwellings of the same size and description in the Northern part of the town, but this difference is more than met by the increased number of houses in the latter Division, the following being the proportions :

	1 Storied.	2 Storied.	3 Storied.	4 Storied.	5 Storied.
Northern Division,	4,256	5,061	503	3	0
Southern ditto,	1,873	1,436	222	7	1

Here then is strong presumption that the aggregate value of these dwellings ought to exceed that of the Southern Division, and if so, it affords an undeniable proof, that the Northern Division, in spite of the assertions to the contrary by the native residents, is considerably under assessed.

It is difficult to arrive at a correct estimate of the *Population* of Calcutta. In 1849 the average number of people occupying *puckha* houses was 8·7 and of huts 5. Assuming this average as a basis, and taking the increase of the number of dwellings erected during the past nine years, there is the following proportion :—

274 puckah houses	× 8·7 =	2,383
8,579 huts	× ·5 =	42,895

making a total of 45,278 as the apparent increase of the population of the town. An accurate census is now much required, and, so far as Europeans are concerned, could be easily made.

Mortality. The total number of natives of both sexes who died in 1858 was 14,883 against 17,701 in the previous year, showing a decrease of 2,818 people, and of the deaths 10,932 occurred among Hindoos, and 3,951 among Mahomedans. Comparing the causes of deaths with those in 1857, following are the respective numbers :

		1857.	1858.
Hindoos,	from cholera,	2,584	5,653
Mahomedans,		1,251	1,542
Hindoos,	from small pox,	2,358	72
Mahomedans,		819	51
Hindoos,	other diseases,	8,324	5,717
Mahomedans,		2,365	2,358

The largest number of deaths occurred in the month of November, in which 1,153 Hindoos and 1,538 Mahomedans are recorded ; the smallest number was in September, being 737 Hindoos and 992 Moosulmen. The monthly average of deaths was 911 Hindoos and 328 Moosulmen. Allowing the apparent increase of the population to be 45,278, and taking the relative number of Hindoos and Moosulmen in proportion to the figures shewn in the census taken by the Chief Magistrate of Calcutta, the percentage mortality in 1858 was,—

3·17 per cent. Hindoos, against 4·83 in 1857
3·31 „ Mahomedans, against 3·99 in 1857

the great disparity arising from the circumstance that whilst the number of deaths among Hindoos was less by 2,334, that of Moosulmen was only 484.

Of the number of Hindoos who died during the past year

1,423 were burnt at Kassee Mitter's Ghât.
4,311 „ Nimtollah Ghât.
3,729 from the town, } thrown into the river.
1,492 from the Hospital, }

Of Europeans the total number of deaths during the year was

1,701, being 1,343 males and 358 females. The causes of death were as follows:—

593	died	from	Cholera.
166	„	„	Fever.
252	„	„	Dysentery.
33	„	„	Diarrhœa.
30	„	„	Consumption.
40	„	„	Convulsions, (children)
2	„	„	Small Pox.
585	„	„	Various causes.

The total item is a heavy one, but it chiefly relates to soldiers and seamen, of whose causes of death the returns in general afford no particulars.

Of the above number, who died during the past year

1,266	were	Protestants.
396	„	Roman Catholics.
28	„	Armenians.
2	„	Greeks, and
9	„	Chinese.

which latter have been included under the term of "Europeans," being strictly speaking foreigners. But of this number 346 were seamen and 683 soldiers, so that the deaths among the fixed population were 672. These deaths occurred in the following months:—

65	died in the month of	January
61	„ „	February
127	„ „	March
170	„ „	April
155	„ „	May
253	„ „	June
197	„ „	July
186	„ „	August
143	„ „	September
142	„ „	October
107	„ „	November
90	„ „	December

356	comprise	infants and children	under	10	years	of age —
37	„	persons between the age of		10	and	20
42	„	do.	do	20	„	30
51	„	do.	do.	30	„	40
31	„	do.	do.	40	„	50
47	„	do.	do.	50	„	60
61	„	do.	do.	60	„	70
19	„	do.	do.	70	„	80
18	„	do.	do.	80	„	90
10	„	do.	do.	90	„	100

The last 28 consist almost chiefly of Roman Catholics, born, brought up, and permanently residing in India. Thus the deaths of children form more than half of the total mortality of the fixed population of the town, and as the deaths chiefly comprise children of Eurasians it shows the somewhat singular fact, that among the descendants of one and the same class there is the greatest mortality as well as the greatest longevity. This is the first attempt to collect statistics of the kind. No regular returns of the number of births and the influx of Europeans have been completed.

The Report concludes by remarks on the practical working of the Municipal Acts, in the matter of the difficulty of realising the House Rate, of the standard of the valuation of Houses for assessment, of the Lighting Rate, of the Carriage and Horse Tax, of the nefarious monopoly carried on by native livery stable-keepers, of the punishment of cruelty to animals, and of the discontinuance or removal of nuisances.

POOREE AND BALASORE.

Bengal Records, No. XXX.

This report, written by Henry Ricketts, Esq. in 1853, is published in 1859.

I.—Pooree.

Pooree, the Southermost of the Bengal Districts, on the West shore of the Bay of Bengal, contains 2,679 square miles, of which, at the time of Survey, 885 were under cultivation. The population, as ascertained by the Survey Officers, is 5,00,963, or 232 inhabitants per square mile. The Land Revenue of the District is 4,73,947. There are but eight Mahomedan Zemindars; all the rest are Hindoos. There is not one European holding land in the District. Of the 275 Estates, 112 only have been held for twenty-five years by the families now in possession.

Sugar, Safflower, Tobacco and Cotton, are produced in small quantities in favourable spots. No Indigo is grown in the District. The estimated quantity of coarse Cotton grown is 1,600 maunds, of which one-half is consumed in the District. The staple of the District is Rice, of which about one-fifth is exported to Cuttack, Ganjam, and the Tributary Estates. But the cultivation of rice in Arracan, where the average of the produce per acre is about double that in Cuttack, has checked the export though

not lowered the prices. There are 101 Estates, paying above Rupees 1,000 Land Revenue. The owners of 13 of these live on their property; 88 are non-resident; but of these 88, 70 reside in the District, 18 are absentees. None of the resident proprietors have received any superior education. Five only can read and write Ooreeah and speak Hindostanee a little. The people are very ignorant, and, for the most part, very poor. There is a great variety of character. The Mahomedan ryot of Bimpoor, South West from Pooree, is restless and suspicious, jealous of insult, and unwilling to undertake any labor except that of tilling his own land. The Hindoos of the Northern Pergunnahs are tractable and simple, but little given to labor. Those on the Coast will labor hard as Molunghees; but they are discontented, and given to complain about trifles more than others.

The diet of all is rice and dál, with salt fish or vegetables. Of tens of thousands the morning meal is but rice cooked the day before. For 1 Rupee and 12 Annas per mensem, a man may have as much as he can eat twice a day of wholesome food, with sufficient variety to prevent disgust

Land Revenue. Of the Rs. 4,73,947 collected from the District, the Rajah of Khonda pays Rs. 1,56,516, the heirs of the late Kishenchunder Singh, Rs. 61,495, two Mehals belonging to the Government Rs. 6,795, and the remaining Rupees 2,49,140 is collected from 268 Zemindars holding their Estates for thirty years under the Settlement commenced in 1835, and concluded in 1843. In ten years previous to the Settlement there were 5 sales for arrears of revenue, and in the ten years subsequent, the sales were 15 or 2.46 of the District with reference to jumma, and 7½ per cent. of the number of Mehals. The remissions on account of droughts and floods between 1835 36 and 1842 were Rs. 5,36,030-15-1¾; from 1842-43 to 1852-53, only Rupees 1,17,091-1-9. These are very striking statistics. Twenty Mehals only sold for arrears in twenty years. The Zemindar of Pergunnah Kotdes gave up his estate in 1833, to be held khas. For ten years the average net jumma was Rupees 72,878, and the average remissions Rupees 23,093 At the Settlement, the sudder jumma imposed was Rupees 81,103, Rupees 8,205 more than the average jumma under khas management! Then the ryots and Zemindar complained of over-assessment. To the former an allowance of 20 per cent. and to the latter of 15 per cent. was given. Since the Settlement 48 of the Mokuddums have been sold out for arrears, and the sale of the tenures of many others within a short period is inevitable. The average assessment on the whole estate was Rs. 1-12-4½ per acre, which is certainly high in a poor country like Orissa.

In 1816 Government directed sluices to be made in the un-

settled districts. The Records were in admirable order. As the Settlement of Khoordah will expire in three years, arrangements should forthwith be made for re-settlement in the following manner. Mr. Wilkinson's Pottahs should stand for the quantity of land they cover. Since this Settlement 64,314 beegahs of land extra have been cultivated. This should be assessed at the rate above the lowest rate current in the village—5 annas, which will yield Rupees 20,098-2-0, from which 10 per cent. for the Mokuddums and Pudhans must be deducted, leaving a net increase of Rupees 18,088-5-0. If the Mokuddum or Pudhan admits that the whole of the land called cultivable has been cultivated, there should be no measurement. The tracts of land considered formerly unfit for cultivation, but now cultivated, will be balanced by the losses sustained by diluvian. The increase should be imposed gradually in 4 years from 1856-57 to 1859-60 by equal instalments, and the leases renewed for 24 years from October 1856.

Abkaree. The proceeds are insignificant. The engagements of the Abkars on the 1st May aggregated only Rupees 1,041-9-7 per mensem, or Rupees 12,739-0-0 per annum, of which nearly two-fifths are derived from the one article of "Ganjah," which nearly the whole population consume. The taxed article is little more than a tithe of the quantity consumed. The illicit drug is brought from the Tributary Mehals, and is much preferred by all the more wealthy classes, as being more mild, and possessing all the medicinal qualities of the Ganjah imported from Bengal, without any of its deleterious properties. A good sample of Ganjah from Ungool will fetch any price demanded. It has now been ascertained that the Ganjah of commerce, grown in Rajeshaye and Bogra, and consumed all over Hindoostan, is the leaves of the male plant, whereas a specimen of the Ganjah so much approved in Pooree, was composed of the flowers of the female plant. This article should be brought under taxation. While under the Collector, from 1841-42 to 1846-47, it yielded a net profit of Rs. 63,267. In the next 6 years under the new system there was an increase of Rs. 23,697, though the expenses had increased 5 times.

Miscellaneous Revenue. The Stamp receipts are, on an average of five years, Rupees 10,898-3-0 only. There is little litigation, and transfers of property are few.

Civil Justice. The only Civil Court is the Moonsiff's stationed at Pooree; the quantity of business is inconsiderable. There are but six Vakeels attached to the office. Between the 1st January and the end of September, when the Court closed, 399 cases were disposed of, of which 150 were decided on trial. Of these 150 cases, the oldest case had been on the file ten months and one day; the shortest period within which a case

was disposed of one month and seventeen days; the average time was five months and one day. Habitually little or no business was transacted during the first week of each month. The Moonsiff's explanation was that he is employed with his weak establishment at that time in preparing the monthly statements for the Judge.

Criminal Justice. The Courts of Criminal Justice in the Poorce District are three,—the Magistrate's, the Assistant's exercising special powers, the Deputy Magistrate's, with Head Quarters at Khoordah. An examination of the Returns for three years gives results creditable to the Authorities. Of 14,763 witnesses examined, 12,639 were discharged having been detained but one day, and only 9 were detained above six days. In heinous offences there were 876 convictions to 381 acquittals. The criminal business is not heavy; the average number of cases of all sorts for these years is only 1,423, of which 905 were petty assaults, but, nevertheless, it was of a nature to occupy much time, for the average number of witnesses examined was no less than 4,921. The Rajah of Khoordah presented a petition, complaining of the anomalous position in which he is now placed as the Superintendent of the Temple Establishment comprising from 4 to 5,000 persons over whom he has no control, and remonstrating against the proceedings of the Authorities, who, in the case in which twenty-two people were crushed to death in the month of July last, desired to hold him answerable, notwithstanding his having been declared free from all responsibility in such cases on his agreeing to provide and pay for a Jemadar and 20 Burkundazes to keep order in the Temple. It is impossible that any one should keep order among such people as the Pundas, Purrarces, and other Officials in the Temple, without some authority to punish trivial offences against the Rules of the Institution. He should be allowed to prohibit an offending Official from entering the temple for a short period. He should be left to superintend and control the religious observances, while the duty of keeping the peace should be entirely in the hands of the Magistrate, to be conducted by officers whose presence in the temple would not be offensive to the Hindoos.

Police. The District is divided into six Thannahs, each Thannah on an average containing 449 square miles. Dacoity and affray are unknown. Forgery is said to be common, but this is not proved by the Returns. Burglary once so common is now rare. The crime of drugging travellers once so prevalent is now put down. Heinous crimes are not concealed in Cuttack. The following list of such offences in three years shews a satisfactory state of things in a poor and ignorant district of 5,00,000 people.

Murder	10
Wounding, with intent to murder,	1
Dacoity	0
Highway robbery	0
Affray	0
Incendiarism	0
Rape	2

In three years there were 698 persons apprehended by the Police, of whom 340 were punished. In the last year the proportion of convicted to apprehended greatly improved, the number being 104 out of 185.

Pooree Jail. Any child might break out of it. The dieting system has been completely carried out, and the use of Opium and Tobacco prohibited. The cost of the subsistence of a laboring convict is Rupee 1-3-3 per mensem. Several alterations and improvements are recommended.

Khoordah Jail. It is unfit for women. It is merely one large ward built of mud and surrounded by a mud wall. The average number of prisoners in 1852 was 22½.

Pooree Pilgrim Hospital, which is an Hospital and Dispensary, is supported by Government at a cost for establishment of Rs. 234 a month. It is a building 294 feet long by 20 wide. The ward for men is divided from the ward for women by merely a canvass screen, and the ward for women is within 40 feet of the public road, and entirely exposed. There are no female attendants in the establishment, though in June 1853, sixty women, and in July 1853, twenty-two women were admitted. The monthly average of patients since October 1851, has been—men twenty-eight, women eight. A nurse and metrannee should be appointed, and the female wards properly separated from the others.

Marine. The Marine at Pooree consists of three surf boats and a boat's crew. The boats were built in August 1852. They are in good condition. The crew receive Rupees 2-8 each. When not wanted for the boats, they are employed in pulling the Cutcherree punkahs and other miscellaneous work. They are to be practised in the boats at least once a month.

Civil Buildings and Public Works. The Moonsiff's Court is intolerable. The other public offices are commodious and well arranged, but the public buildings are not generally in good order. The Embankments in this District measure 273 miles, on nineteen different Rivers, all branches of the Mahanuddee, which is a mountain torrent of much the same character as the Damoodah. The people complain greatly of the state of the Embankments, and it is true that floods happen continually, indeed they happen whenever the Rivers fill. Sluices are quite as ne-

cessary as Embankments, and in consequence of there not being a sufficiency of Sluices, a mischievous system has prevailed of making secret Nullahs of tiles through the Embankments, by which means water, when wasted, is procured for irrigation at the risk of the destruction of the Embankments when the floods come down. There should be a separate Executive Engineer for the Pooree District for two years.

Pooree School, hitherto Vernacular, is henceforth to be English with a Master on Rs. 150 a month. Hence the number of scholars has risen from 32 to 75; of these 40 are the children of the Native Officers on the different Establishments, and 35 are the children of the Zemindars, &c., of the District. There is not one connected with the Priests or other Officers of the Temple. The School Room is bad. The demand for education among the Ooreeahs is at present small enough. Their Literature, till within these few years, consisted of fables and romances connected with their religion, scratched on palm leaves. The utmost ambition was to know enough of the language to conduct the business of the Courts, and it is the same still. Till English shall be the language of the Courts and of the people, justice must be administered either in a language unknown to the people or unknown to the Judge, for the Authorities, with a very few exceptions, never have been, and never will be acquainted with Ooreeah. It is a misfortune that Hindoostanee was not introduced into the Courts instead of Ooreeah. A considerable section of the people understands Hindoostanee. Ooreeahs go all over Hindoostan in search of Pilgrims, or in search of bread. Many teach their children Hindoostanee to fit them for callings in which a knowledge of that language is necessary to success. The Mahomedan population all speak Hindoostanee. Had Hindoostanee been introduced, the Ooreeahs would have partaken in the advantages of the rapidly rising Literature in that language; they would always have had public Officers among them acquainted with the language used in their Courts, and so large a portion of the people would have thoroughly understood all that passed in the Courts, that the remainder could have had no difficulty in becoming acquainted with the proceedings. As it is, while the Hindoostanees and the Bengalees are progressing in knowledge and acquirements, the Ooreeahs must stand still, and must always have public Officers ignorant of the language of those whom they examine, and in which their proceedings are recorded.

Post Office. The control of the Dâk now under the Postmaster at Cuttack should be transferred to the Pooree Postmaster.

Salt. In this Agency Salt is made by means of solar evapora-

tion, as well as by boiling brine. Last year 4,51,000 maunds of "kurkutch" or solar evaporation Salt, was made. It is all sold for consumption in the District, Sumbulpore and the Tributary Mehals, at Rupee 1-8 per maund. In the two last years the sales were as follows:—

	1851.	1852.
For district consumption	93,717	93,853
Sent to Cuttack	28,578	77,803
To Sumbulpore	488,77	38,530
To Tributary Estates	25,657	40,809

The population of the District is 500,963. At 8 seers per head per annum, 93,853 maunds, the quantity sold last year, is supply for 4,69,265 persons, leaving 31,698 persons consumers of smuggled Salt. In a producing District this must be pronounced very satisfactory. The boiled Salt is all exported to Calcutta. Seven or eight lakhs of maunds of "kurkutch" could be made and landed at Calcutta at about Rupees 46 per 100 maunds. It would be advantageous to the District, and might tend to keep down prices in Bengal, if Merchants were allowed to contract for the manufacture of "kurkutch" Salt at Pooree and to import it into Bengal, paying the duty of Rupees 250 per 100 levied on foreign Salt. The highest rate at which the boiled Salt has been stored during the last six years is Rupees 55-7-8; the lowest is Rupees 49-5-4. It cannot be made at less cost. The highest rate for kurkutch has been Rupees 53-3-1; the lowest, Rupees 28-13-7. In favorable years if the order were to be unlimited, it might be manufactured at a considerably lower rate, and although in appearance less pure than boiled Salt, it is much preferred by all classes in this part of the country.

II.—Balasore.

Balasore or the Northern Division of Cuttack contains, including Pergunnahs Futtehabad and Bhellarachour on the North bank of the Sooburnreeka River, 12,65,825 Acres or 1,977 square miles. The population is said to be 5,00,000. The Estates paying revenue are 1,140. The jummah of the District is Rupees 3,89,182-6-0, so that the average revenue paid by each Estate is Rupees 341. There are only four Estates paying a sudder jummah above Rupees 10,000; seven paying between 5 and 10,000, and sixty-six paying above 1,000 and less than 5,000; of these 77 considerable Estates, fifty have been held by the present proprietors for above 25 years. Of the 1,140 proprietors, 393 reside on their Estates, and 747 are non-residents, 1,053 are Hindoos, 75 are Mahomedans, 12 are held by Government. There is not a European Land-holder in the

District. None of the Zemindars of the Northern part of the District have received an education out of the common routine. Sugar, Cotton and Tobacco are produced in small quantities. The staple produce is Paddy. From 1836 to 1843, the exports amounted to 18,94,332 giving an yearly average of 2,36,800 maunds. From 1845 to 1852 the exports have been 53,37,822 maunds, being an average of 6,67,300, nearly treble. Besides this, a considerable quantity is exported by land to Midnapore. In 1831 there were but 56 vessels belonging to the Port, there are now 167, notwithstanding the loss of 44 in the gale of October 1851.

Land Revenue. The Land Revenue of the District is Rupees 3,89,182-6 paid by 1,140 Zemindars; of these 608 pay their Revenue directly into the Collector's Treasury, 532 pay to the Deputy Collector stationed at Bhuddruck. The 532 Mehals are composed of one large Estate, belonging to the Government which is held khas, 525 Mehals, the jummah of which is less than Rupees 200, and six Mehals, the jummah of which is above Rupees 200, the proprietors of which requested to be allowed to pay their Revenue in that Treasury. From 1832-33 to 1841-42 the remissions of Revenue amounted to Rupees 9,24,176-10-2, from 1842-43 to 1851-52 they were only Rupees 1,02,870-1-8. From 1840-41 to 1845-46 the remittances of Treasure to Calcutta were Rupees 5,67,893-7-9 being an average of Rupees 94,648, from 1846-47 to 1852-53 the remittances were Rupees 18,98,995-1-2 being an average of Rupees 2,68,427. Since the completion of the Settlement in 1843 thirteen Mehals have been under the Court of Wards. The value of property when brought to public sale has trebled as in Cuttack. Cultivation has spread, but remissions commensurate with losses have not been granted. Since the Settlement, eighty Mehals have at different times, and for different periods, been held khas, and managed by Government Officers. In twenty-six Mehals the collections have fallen short of the jummah assessed at the Settlement. In fifty-six Mehals the collections exceeded the Settlement jummah. This is confirmatory of the general impression, that upon the whole, the Settlement is lighter in Balasore than in Cuttack. There are only five Mehals now held khas in Balasore. The demand for Putwaree papers should cease and the Canoongoes be dismissed. The Records are admirably arranged. Coarse paper, such as is made in the Jails, should not be used. It is eaten by worms. The beams of all rooms built for records should be of iron, and the floors laid with sheets of zinc all over.

Abkaree. It has been proposed to transfer this department to the Collectors. The new system has existed in this district six

years. On a comparison with the last six years of the Collector's management, there is an increase of Rupees 24,861-1-0 in the Opium Department, and a loss of Rupees 9,497-13-0 in the other Departments, the net gain being Rupees 15,364-4-0. The use of Opium has greatly increased. Ganjah is not approved of in Balasore, but it is less injurious than opium-eating.

Criminal Justice. The Criminal Courts in the division of the Province are those of the Magistrate, Joint Magistrate, and Deputy Magistrate stationed at Cuttack. The work is heavy; in the three years from 1850 to 1853, 10,593 witnesses were examined, of whom 3,029 were detained one day only, and 468 above six days. There were in three years 311 convictions in heinous cases to 302 acquittals. Since the beginning of 1834 the Deputy Magistrate has disposed of no less than 825 Criminal cases of all kinds, has received and passed orders on 5,850 reports, and disposed of 1,339 petitions.

Police. The District is divided into six Thannahs containing each, on an average, 329 square miles. Violent crimes are more prevalent than in the other Divisions of the Province. There were in the three years 1,995 crimes of all sorts, of which 265 only were of a petty nature. The average number of persons apprehended was 1,060, the convictions 471. The total number of convictions in heinous cases was 311 to 302 acquittals. From want of experience young men of good character and education are useless as Darogahs of Police. A salary of Rupees 25 as a Mohurrir, with a prospect of becoming a Darogah when some experience had been acquired, and of rising ultimately to a Deputy Magistracy, would induce many persons of education and character to commence, where they must commence, to be successful in the lower grade Were the salary of Mohurrirs Rupees 25, and of all Darogahs Rupees 75 and 100, whenever a vacancy occurred it might be filled, if desired, by the younger branches of all the most respectable land-holders in the District, but much depends on the character of the District Officer; they will not, on any terms, accept office under some men, they will accept any office of respectability under others. The Thannah has no lock-up place. A Thannah office should be built of masonry. The Public Buildings are not in good order.

Jail. The Jail is in good order. The Hospital, the Ward for Women, and the Civil Jail should all be apart from the Criminal Jail for male convicts. The consequences of having the Ward for females inside the Criminal Jail were shewn not long since. A person who had been confined in the Criminal Jail and released, was detected trying to scale the walls and get into the Jail again near the Women's Ward. The present arrangements were all made to save expense in buildings and separate guards,

but they are bad. There should be an Hospital for the 60 men of the Paik Corps at Balasore. The prisoners of Cuttack and Balasore are chiefly employed in making paper which is extensively used in all the offices. This paper is sized with a preparation of rice in which worms will breed, and in a few years, not only will the records of the present time be eaten up, but the old papers will be injured. Either another sort of sizing should be used, or arsenic should be mixed with this sizing, or the public officers should be positively prohibited from using the Jail paper, except for covers of letters and such purposes. All prisoners sentenced to beyond three months at Pooree and beyond six months at Balasore, should be sent to Cuttack.. A certain sum should be laid out every year in gradually providing complete protection from an irruption of the sea. The inundation of 1831 cost the Government 26,000 subjects and many lakhs of Rupees. Nearly every year a hurricane occurs somewhere at the head of the Bay.. The cost of protecting the South Pergunnahs would be about Rs. 50,000. The people now fear the floods from the Hills more than the flood from the Sea.

Marine. The Marine Establishment at Balasore is the Master Attendant and the Schooner *Orissa.* His duties are to regulate the vessels trading in the Port, to look after the buoys in the Balasore and Damreh Rivers, to collect the buoyage duties, to assist distressed vessels, to take charge of wrecked property, to ship treasure, to convey the annual supplies of opium, stationery, &c. to Pooree, Cuttack and Balasore, &c. The vessels of the Port of Balasore have of late rapidly increased. They now number 167, notwithstanding 44 having been lost in the gale of 1851. The trade of the Port is yearly increasing.

Custom House. The value of the Imports for the last five years has been as follows :—

1848-49	... ...	83,158	6 4
1849-50	... ...	94,829	3 4
1850-51	... ...	1,15,626	13 5
1851-52	... ...	1,41,524	6 6
1852-53	... ...	1,00,909	12 6

The falling off was in the following articles—Beetul Nut. Copper, Europe Thread, and Brass-Ware. The quantity of Beetul Nut has diminished but little, but the value has decreased considerably. This is the case in other markets, notwithstanding the greatly decreased produce of the Eastern Districts, occasioned by a blight which has fallen on the plantations and destroyed thousands of trees.

The value of the Exports was in—

1848-49	...	...	...	1,26,716	11	6
1849-50	...	...	...	2,64,175	12	0
1850-51	...	..	...	3,49,793	12	1
1851-52	...	...	...	1,74,733	13	1
1852-53	...	...	...	1,99,437	3	1

Nearly the whole is duty on rice and paddy. The falling off is attributable to the storm of October 1851, in which one-fourth of the whole shipping of the Port was destroyed. The aggregate duties for five years from 1848-49 to 1852-53 amounted to Rupees 12,287-11-5. The expenses were Rupees 6,183-15, so that the check is obtained at no cost, but on the contrary produces a trifling income. An Hospital should be erected at Balasore. Its expenses are estimated at Rs. 150 a month.

Salt. The Salt of the District is famous for its purity. The average quantity of Salt manufactured during the six years from 1840-41 to 1845-46, was 4,94,940 maunds, for the six years from 1846-47 to 1851-52 it was only 3,29,810, the manufacture being limited in consequence of the large importations from Europe. In this agency the charge has been brought down to Rupees 62,877 per 1,00,000 maunds landed and stored at Sulkea, including all the Golah charges, and should the produce be increased to 7 or 7½ lakhs of maunds, which it might be, the cost would be still less. The sale of Salt for consumption in the District has, for the last seven years, averaged 77,125 maunds, and last year was 82,396. This at 8 seers each, is supply for 4,11,980 persons. The population is estimated at 5,00,000, so that 88,020 consume smuggled Salt; considering the very large space over which the manufacture in this District is spread, perhaps a better return could hardly be expected.

Schools. Thirty-seven boys have been enrolled in the books of the new English School, but the desire for an English Education is not great. A mistake has been made in endeavouring to improve Ooreeah, instead of introducing Hindoostanee or Bengalee; but the time has passed for effecting a change. All public officers should insist on their subordinates dividing their words the one from the other as in English and Bengalee, instead of stringing them together. It increases about 10 per cent. the trouble of the writer, and decreases about 30 per cent. the trouble of the reader. The Ooreeah School at Bhuddruck is badly attended, there are 52 in the list, but the average attendance is 15 only. English should be taught in this School also.

THE REVENUE SURVEY IN SIND.

1856 and 1857.

In continuation of No. XVIII. of the Bombay Records: New Series.

On the 16th April 1858, Mr. Frere the Commissioner in Sind reports to the Governor of Bombay the progress made in the Survey and Settlement of the Land Tax in Sind for 1856 and 1857. The plan of operations laid down was very similar to that followed in the Punjab. Settlement Officers were to be employed to fix, in the first instance, the boundaries of villages and estates; to define all which was to be subsequently recorded by the Survey; and to make the rough vernacular plans, which are a necessary preliminary to the more scientific operations of the Survey. What is technically called in the Bengal Presidency a *revenue*, as distinguished from a *topographical* Survey establishment, was then to follow the Settlement Officer. But the functions of such an establishment are so different from those of the Bombay Revenue Surveyors, that in Sind, as in the Punjaub, the North-West Provinces, and Bengal, the duties of a Revenue Survey establishment are confined to surveying and mapping and collecting statistical data, and have nothing to do with assessing the land-tax, the most essential difference between the operations of a revenue, as distinguished from a topographical Survey being, that it records all facts and features which have a purely fiscal importance, as well as those which are of topographical value; whereas a topographical Survey takes notice only of such facts as have a strictly topographical importance. When the Revenue Survey had completed its maps, and recorded the statistical data collected, their measurements would be applied as a test of the general accuracy of the results of the vernacular plans and measurements made by the Settlement Officer. If satisfactory, the latter would then complete his Settlement by finally fixing the assessment of the Government land-tax, and by settling all rights and defining all liabilities which had not been previously settled and defined as a necessary preliminary to the Survey operations.

The duties of a Settlement Officer in Sind were more difficult than elsewhere. In other provinces he had either some rough temporary Settlement framed under our own Government, or, at any rate, the records of an unaltered Native system to guide him in his operations. But in Sind the Native system had been broken

through without the substitution of anything however rough. He had to combine with his work the charge of the current revenue duties of the district, which of course limited the amount of work he could get through in a year. These facts were not explained to the Government of India, which objected to the number of Settlement Officers asked for. The amount of work done has in consequence been less than it would otherwise have been, and that which has been executed without any previous knowledge of Sind Revenue management is so defective, that much of it will have to be done over again.

The work done may be arranged into four classes as regards the degree of certainty attending the levy of the land tax. The three Kardarates comprising the whole Frontier Districts, Omerkote—Hydrabad Collectorate, and portions of the Kurrachee talooka, are in the First Class. In these the land assessment may be considered as fixed and permanent, and totally independent of the caprice of local Revenue Officers. Shikarpoor, Nowshera (Abra) Sukkur, Larkhana, Nusseerabad, Kumber, Ruttadera, Mehur, Tigr, Kukkur, Rohree, Gotekee, Ooboura, Meerpoor, (Mathela)—Shikarpoor Collectorate, are in the Second Class. In these the money rates per definite area have been fixed as in the First Class, but owing to the imperfection or incompleteness of the demarcation, or the measurement or their record, the assessment cannot be considered as perfectly fixed and free from fluctuation. The Third Class comprises the following talookas:—

Hydrabad Collectorate.

Halla.	Nowshera (Sahitee).
Sukkurund.	Mora.
Shadadpoor.	Hyderabad.

Kurrachee Collectorate.

The Hubb valley and Hill districts in the Kurrachee Collectorate.	Ghorabaree.
	Jathee.
	Mahjunda.
Kotree.	Tatta.
Sehwan-Johee.	Meerpoor Buttora.
Sakia.	Shahbunder.

In these the rate has been *temporarily* fixed on a given area, but it is not free from liability to fluctuation from year to year, or according to the discretion of the local officers. The Fourth Class includes the following talookas:—

Hydrabad Collectorate.

Goonee-Dhera-Mobut.	Buddeena.
Bagha-ke-Tanda.	Jooda.
Alyar-ke-Tanda.	Meerpoor (Khas).
Narra.	

Kurrachee Collectorate.
Portions of Talookas.
Kotree and Mahjunda.

In these no money rate per beega or acre or other fixed area has been yet settled, so that a man, when he sows, is not able to tell what assessment he will have to pay on his crops. With trifling exceptions, all the talookas of the Hydrabad and Kurrachee Collectorates were in these two last classes, up to the end of 1857; but Settlements are in progress, which will place many of them in the second class before the end of 1858.

In the Omerkote Districts the settlement is popular. The Government revenue is higher than it ever has been before under our Government, and is annually improving. In the Frontier Districts the results which might have been expected from a light fixed land-tax are abundantly visible. In the Shikarpore Collectorate, the good effects of fixed rates of cash assessment are shown in the general contentment of the agricultural classes, and a steady increase of the revenue; the result affords every reason for expecting that the completion of the Survey and Settlement will give a great impulse to agricultural enterprise, and largely increase the Government revenue. The Hydrabad and Kurrachee Collectorates contrast favourably with Upper Sind, where the difficulties were so much greater.

The following Table shews the number of villages surveyed up to the end of the season 1856-57 :—

Collectorates.	The number of Villages and extent of Area Professionally Surveyed, up to the end of the season 1856-57.		The whole number of Villages and extent of Area remaining to be Professionally Surveyed.		The number of Villages and extent of Area remaining to be Professionally Surveyed, of which the Boundaries have been Demarcated in advance of the Survey.		The number of Villages and extent of Area in which the Interior Measurements have been completed.		Remarks.
	Villages.	Area.	Villages.	Area.*	Villages.	Area.	Villages.	Area.	
		Beegas.		Beegas.		Beegas.		Beegas.	* The approximate area of the districts not yet surveyed is here given.
SHIKARPOOR	290	46,47,793	1,182	55,79,873	551⅓†	23,47,748	130⅔	6,34,457	† This includes the portion of the Larkhana districts which have been surveyed according to the "Bombay" System.
				Acres.		Acres.			
HYDERABAD	...	...	1,289	63,61,200	470	13,00,000	...	3,769	
KURRACHEE	...	...	...	...	...	...	...	...	The area of the Kurrachee Collectorate about 16,000 square miles.

Lieutenant Macdonald reports his Revenue Survey operations during 1856-57 in the Rohree or left bank Deputy Collectorate of the Shikarpoor Division. The total area surveyed in detail was 3937.74 square miles, at an average cost of Rs. 13-12-3 per square mile, and Rs. 178-13-11 per village circuit. The above includes all the contingent charges, as well as carriage for the Native Surveyors and Measurers. The whole area was divided into 17 main circuits. The maximum area of any circuit was 325,822·10 acres, and the minimum 55,921·42, the average being 165,426·65. It was very difficult to obtain labour for the Survey. The G. T. Station at Sukkur is the point of origin for the Upper Sind Survey. From this point all the co-ordinates will be calculated, and the converging of the points east and west of this station in the Sind Survey operations will be calculated on it. It has not been feasible to connect on any G. T. Stations, but pillars have been built in suitable parts of the districts, and where the triangulation of the G. T. Survey takes place, these marks will be available to allow of the Revenue Survey operations being connected with the G. T. results.

The Rohree districts were ceded to the British by a treaty concluded between Meer Ali Moorad Roostum and Musseer Khan, at Nownahur, in the year 1842. Meer Ali Moorad, the present Talpoor Ameer of Khyrpoor, kept unlawful possession of this territory for a period of ten years without a claim to it. On the fraud being discovered, he was publicly degraded from his rank as Rais by the Governor General in Council, who, in his proclamation, dated 2nd January 1852, declared to all India how Meer Ali Moorad, having been fairly and openly tried on the charge of having connived at fraud and forgery of documents, in order to conceal the just rights of the British Government to the possession of territory governed and administered by him, and of which he had alienated the revenue to his own use, was ordered to restore it to the charge of the Magistrate of Shikarpoor, who would henceforth govern the Rohree districts on behalf of the British, to whom they lapsed as having formerly belonged to Ameers who were faithless in their engagements with the British Government, and who had, therefore, forfeited the right conceded to them by the treaty of 1842, concluded with Meer Ali Moorad. They contain a population of 136,902 souls (inclusive of Gotekee, which contains 32,172), of which 105,166 are Mussulmen; the remainder are Hindoos and low-caste. Of the total area, a very large proportion consists of desert waste. It pays a gross land revenue of Rs. 3,27,000. Revenue from minor sources, amounting to Rs. 25,000 and Rs. 51,000 are at present alienated, leaving a total of Government Revenue of

2,000,000 and Rs. 97,000. There is only one river in the district,—the "Indus."—flowing for about seventy miles in a S. by W. direction, having an average width of about 1,500 yards, with an average depth of about nine feet in the dry, and twenty-four feet in the rainy season. Its usual velocity is three knots an hour, which increases to seven in the freshes. It is navigable throughout the year by steamers of large size drawing from three to four feet of water, and there are Native boats of sixty tons burthen plying on it. Its former course was past the old town of Arore, but in some tremendous convulsion of nature the river forced its way through the Bukkur hills, and took its present course.

The native gentry are not rich. There are not two landholders in the district who could afford to spend Rs. 2,000 a month. They are all keen sportsmen, and never leave their houses without sporting adjuncts, such as hawks or dogs, accompanying them. The people are lazy and good-tempered, very adverse to work, except as helps in all sporting matters; as beaters they are unrivalled. They are addicted to drunkenness, are filthily dirty in their persons, and are immoral in the extreme; they are tolerably muscular, and, generally speaking, are tall and robust. The men of the Registan, the Desert, are exceptions to the above. They are very active, traversing miles and miles of ground every day, and breathing the pure desert air, where they escape numerous evils common to those who reside near the river; they are far finer and stronger men. Lieut. Macdonald says, "I thoroughly enjoyed my short stay in the desert. These sand-hills abound with antelope, and I often stalked them with the aid of a camel, trained for the purpose, keeping behind him. This animal would take me up to within eighty or an hundred yards of an antelope, and would be mortified beyond measure if I missed my shot; he devoured the entrails and liver of the slaughtered deer with great gusto. Never had I heard of a camel being carnivorous; and never do I remember any sight more inappropriate or disgusting, than the huge brute, with his head high up in the air, slowly munching up the bloody, tangled mass of entrails and garbage which hung in clotted festoons from his jaws." Camels take a part in agricultural operations, and excellent ponies are bred in the district of Rohree.

ADMINISTRATION OF THE PUBLIC WORKS DEPARTMENT.

1857-58.

ARRANGEMENTS have been carried out for relieving the Engineers of most of the duties appertaining to the Barrack-master's department. In June 1857 it was determined to limit expenditure to absolutely necessary works, and such repairs as were indispensable to the stability of each class of buildings. The Public Works' accounts have attracted great attention, and Capt. Dickens has been placed in special charge of this department for Bengal. Rules were laid down to restrict grants of public money in aid of works partly paid for by individuals. The principle is that the contributions are to be set down as a portion of Public Works Income, and the entire expenditure to appear in the public accounts as the cost of the work, so that the private contribution is to be regarded as an aid to the public work, not the public grant as an aid to the private undertaking. Officers of the department are to supply themselves with tools without the interference of the Ordnance Department; Soldiers in the Hills are to be employed on Public Works, and paid by contract.

The following shews the quantity of barrack room prepared during the year for the new Army of Europeans rendered necessary by the Mutinies:—

	Lower Provinces. For men.	N. W. P., Nagpoor and Saugor Territory. For men.	Total.
New Barracks entirely built	8,400	18,800	27,200
Barracks restored and miscellaneous buildings restored and adapted for cover ...	3,350	21,800	25,150
Existing permanent Barracks	4,850	5,900	10,750
	16,600	46,500	63,100

The "new Barracks entirely built" vary exceedingly in character and substance, from shelter of the most hasty and temporary character, to that of the kind usually understood as "permanent." Out of the whole amount, cover for about 2,200 men may lay claim to the latter character, including the work at Fort William, which has been some years in progress. Cover for between 8,000 and 9,000 men is of a very temporary kind; the remainder is of a medium kind, of which the better examples may last for at least 12 or 15 years with ordinary repairs. The iron framework sent out from England has been largely used in Bengal. Barracks have been ordered for Native troops

in Pegu on condition that their families do not accompany them.

Terms have been arranged with a private company for working a section of the iron district of Kumaon.

The Dacca and Arracan road has been abandoned as a whole. Only the section between Chittagong and Dacca will be completed.

Railways. Good progress has been made in Bengal except in the Soane district where the works were entirely stopped by the Mutinies. At the Soane bridge the damage done was Rs. 20,000. In the North West the line from Allahabad was opened to Futtehpoor at the end of March, and it was hoped that the opening to Cawnpoor would be possible before the end of the rains. But 7¼ lakhs of property were lost in the Mutinies. A new line of Railway was moreover adopted up the Doab. Mr. Rendel, an Engineer sent out by the Railway Board to report upon measures for hastening the work, recommended the substitution of iron for brick on most viaducts. The recommendation was adopted. The revenue return of the East Indian Railway ending June 1857 shewed the following satisfactory result:—

Gross Revenue	Rs.	7,01,953-4-9
Working Expenses	„	2,63,241-4-2
Net Revenue ...	„	4,38,712-0-7

This is nearly six per cent. on the highest estimate of the cost of the experimental line, including the two termini and the rolling stock. There is improvement in almost all items of working expenditure. The following statement shews the expenses applied for sanctioned and expended in 1857-1858:—

ABSTRACT.

	Presidency or Province.	Class of Work.	Amount of Expenditure for 1857-58.	Total Expenditure 1857-58, as proposed to be reduced.	Total Expenditure 1857-58, as originally applied for.
1	Madras ...	State	8,67,755		
		Internal Improvement ...	9,79,810		
		Repairs	14,92,32[illegible]		
		Petty and Emergent Works	2,60,11[illegible]	36,00,000	68,59,671
2	Bombay ...	State	10,53,882		
		Internal Improvement ...	3,33,324		
		Repairs	7,50,000		
		Petty and Emergent Works	1,62,794	23,00,000	69,25,891
3	Bengal ...	State	2,54,338		
		Internal Improvement ...	1,49,620		
		Repairs	10,00,000		
		Petty and Emergent Works	1,96,042	16,00,000	58,21,425
4	N. W. Provinces ...	State	5,00,000		
		Internal Improvement ...	5,10,000		
		Repairs	12,00,000		
		Petty and Emergent Works	1,90,000	24,00,000	50,00,000
5	Straits Settlements	State	79,300		
		Internal Improvement ...	7,150		
		Repairs	...		
		Petty and Emergent Works	16,550	1,00,000	2,26,572
6	Punjab ...	State	27,95,141		
		Internal Improvement ...	7,35,017		
		Repairs	2,50,000		
		Petty and Emergent Works	3,19,842	41,00,000	63,31,958
7	Oudh ...	State	78,169		
		Internal Improvement ...	...		
		Repairs	77,674		
		Petty and Emergent Works	1,44,157	3,00,000	12,49,321
8	Pegu ...	State	3,88,174		
		Internal Improvement ...	...		
		Repairs	1,54,740		
		Petty and Emergent Works	1,57,086	7,00,000	37,82,606
9	T. and M. Provinces	State	2,27,989		
		Internal Improvement ...	8,200		
		Repairs	46,349		
		Petty and Emergent Works	17,462	3,00,000	10,96,528
					3,72,93,972

ADMINISTRATION OF MADRAS.

1857-58.

The Madras Presidency, despite an unfavourable season and the necessity of stopping Public Works, has been tranquil.

Civil Justice. There were during the year 1,97,751 suits to be adjudicated, involving property worth two and-a half millions sterling. 1,30,526 decisions were passed, thirty-four per cent. of which were in favour of defendant, eight in favour of plaintiff, and fifty-eight compromised. Of the ninety-six thousand suits disposed of by the District Moonsiffs, no less than one-sixth is in cases where the value at issue is under ten rupees, and the average value of all claims brought before these Officers, is but fifty-two rupees. Where the value of the property at issue is under ten rupees, and where the claim is not on account of real property or personal damages, the District Moonsiffs have a co-ordinate jurisdiction with the village Moonsiffs, and it is not a little remarkable that there were brought before the latter, no less than twenty-four thousand five hundred suits representing claims of upwards of a lakh and-a-half of rupees in value, and decisions were passed by them in nineteen thousand two hundred cases, more by three thousand than were passed in such petty cases by the District Moonsiffs, clearly showing a preference on the part of the people for the quick and easily accessible justice, administered by those unpaid officers, to the comparatively expensive and tedious process of a suit before one of the regularly established courts.

Criminal Justice. Upwards of 90,000 criminal charges were investigated involving upwards 200,000 persons. Of these the police committed about twelve thousand for trial before the higher Courts, sixty thousand were punished, and one hundred and fifty thousand acquitted or released; about thirty-five per cent. of the latter being released on account of default, compromises, &c. Deducting these, and the persons committed, from the gross number, the convictions by the police are about thirty-nine per cent. of those apprehended. Of the 8,000 persons sent before the Magistrates 47 per cent. were punished, and 650 sent up for trial. Of about three thousand persons tried by the Judges of the Sessions Courts, about seventeen hundred were acquitted, and allowing for those held to security, and for those on whom final sentence was passed by the Foujdaree Adawlut, the convictions are forty per cent. The general average of convictions in all the Courts is about forty-two per cent. of those put upon their trial. There is a great decrease in offences committed by the Police. Altogether fifty-nine thousand persons were pun-

ished. Of these forty-five were hanged, thirty-three transported for life, nineteen hundred sentenced to imprisonment, eight hundred and sixty were flogged, forty-three thousand fined, and about ten thousand confined in the stocks and village jails. In the more serious offences the proportion of convictions to population was one in nine thousand; in the most heinous crimes one in twenty-one thousand.

The Inspector of Jails has reported very unfavourably of the Jails of Combaconum, Madura, and Coimbatore, and estimates for new jails have been ordered, but no great expenditure can be sanctioned at present. The new jail at Salem is partly built, but the jails are all overcrowded, and only one, Trichinopoly, is tolerably secure. Two instances of jail breaking occurred; sixty-three prisoners escaped, and the efficiency of the jail guards was increased. From the Returns of Prisoners up to the close of 1857, it appears that the total number of persons in prison at that date was 6,880, the number of convicts 5,622, of prisoners held to security 531, of other classes 727. The ratio of mortality to numbers has been, in some jails, very high, amounting to a total of 490 on an average of about 6,500 prisoners. In one small prison alone, that of Itchapore, on an average of 71 prisoners, there were 26 deaths, of which 11 were from cholera. At Salem the deaths were no less than 75 on an average of 220 prisoners, and at Madura there were 59 on an average of 219 prisoners.

Revenue. The Monsoon brought too much rain which deluged the country, breached the tanks, and destroyed the means of irrigation. This caused a decrease of cultivation :—

	Wet, or land irrigated from Govt. sources.	Dry, or land not irrigated from Govt. sources.	Garden.	Total.
	Acres.	Acres.	Acres.	Acres.
1856-57	25,05,104	91,38,174	4,11,951	1,20,55,329
1857-58	23,56,044	91,68,956	4,08,416	1,19,43,416
Increase ...	...	40,682	...	...
Decrease ...	4,49,060	...	3,555	1,11,913

The Total Revenue collected was :—

	Land Revenue.	Abkarry, or Tax on Spirituous Liquors.	Salt.	Sea Customs.	Moturpha, or Tax on Profession, &c.	Stamp Revenue.	Frontier.	Extra Revenue.	Grand Total.
1856-57 ...	3,75,09,713	23,12,853	54,04,795	13,09,646	10,82,974	7,07,716	1,95,319	2,09,805	4,88,00,934
1857-58 ...	3,59,79,828	26,22,846	56,97,517	12,81,262	10,85,408	7,65,525	1,93,858	2,12,500	4,78,69,019
Increase.....	...	3,09,993	2,92,722	...	2,434	57,809	...	2,695	...
	...	£30,999	£29,272	...	£243	£5,781	...	£270	...
Decrease....	15,29,885	...	...	28,384	...	...	1,461	...	9,31,915
...	152,988	...	...	£2,838	...	...	£146	...	£93,191

The trade of Madras continued healthy, and the port of Cochin is rapidly increasing. It was visited during the year by 100,000 tons of shipping. The annexed memorandum shows the value of bullion and specie exported and imported during the last five years in the whole Presidency.

	Imports.	Exports.
	Rs.	Rs.
1853-54	1,00,82,454	1,05,68,829
1854-55	75,40,804	74,17,510
1855-56	1,43,88,591	52,77,904
1856-57	1,70,32,599	33,38,315
1857-58	1,84,60,055	1,16,43,954

A number of small and vexatious taxes, on cattle or pasture land, on sheep and goats, trees and other things, have been abolished. They were all limited, local, and profitless. The district printing presses have succeeded, costing no more than the old arrangements, lightening labour, increasing the communication between officials, and securing publicity for official details.

The Survey of the Presidency has been commenced. The reporter notices improvements in the management of alms-houses (Chuttrums) local funds, and proceeds to notice private companies for irrigation. Two great schemes have been proposed.

1*st*.—A canal to connect the Eastern and Western Coasts of the Presidency, passing from Ponany, through the Palghaut Gap across the Districts of Coimbatore, Trichinopoly, and Tanjore, and terminating at Negapatam (a line nearly coincident with that of the Madras Railway, and the proposed great Southern of India line).

2*nd*.—The junction of the Toombadra and Prunar Rivers by a cut crossing portions of the Bellary and Kurnool Districts. The Parmar debouches on the Eastern Coast in the District of Nellore. A branch canal was intended to extend from the Toombadra to Hyderabad.

Both these undertakings involve great expenditure to an amount not yet ascertained, and must encounter great physical difficulties. It would therefore be impossible to guarantee a fixed return on the outlay to be incurred in such works. It has also been pointed out that the line from Ponany to Negapatam intersects the watershed of the country, and cuts off the supplies of a vast net-work of petty reservoirs and channels, fed by the drainage of the country, and the small streams of the hill ranges. Some of the streams, from which the canal would be filled, are feeders of the River Cavery, whose waters contribute to the irrigation of Tanjore and Trichinopoly, and are so completely absorbed, that a mere rivulet alone reaches the sea. Further em-

barrassments would arise out of the existing system of an amalgamated land and water rate, and the necessity of subjecting the ryot to an authority entirely distinct from that of the Government. It is believed that these considerations have probably not suggested themselves to the projectors of the company.

Besides the introduction of European capital and skill in the formation of Coffee plantations on the Neilgherry and Shevaroy Hills, and in the Wynaad, where the planters are already becoming a numerous and important body, several mercantile houses have branch agencies in the provinces, for the purchase of raw produce on the spot where it is grown, and to some extent directly from the producers. The most important of these establishments are the sugar-works of Messrs. Arbuthnot and Co., in Rajahmundry and Ganjam; those of Messrs. Binny and Co., at Aska, in the latter District; and those of Messrs. Parry and Co., in South Arcot, where, besides sugar-cane and jaggery, very large purchases of indigo and oil seeds are yearly made. As much as £150,000 has been sometimes spent annually by this firm in South Arcot alone. It is needless to say that such an influx of capital is of the greatest benefit to the cultivating classes and indirectly to the Government.

The East India Iron Company have also extensive foundries at Beypoor, in Malabar, and at Trinamalay, in the interior of South Arcot.

Education. The University of Madras has been constituted by an Act dated 5th September 1857. It is a Board for holding examinations for degrees in the several Faculties or branches of learning within its scope. These are four;—Arts, Law, Medicine and Civil Engineering. The first, the only one brought into operation, comprehends. I. Languages; II. History; III. Mathematics; IV. Moral Philosophy; V. Natural Philosophy; VI. the Physical Sciences; and VII. Logic and Mental Philosophy. All institutions may be affiliated the managers of which shew that they have the means of educating up to the Bachelor of Arts standard. At the first Entrance Examination 41 candidates appeared of whom 36 passed. At the second of 79 candidates only eighteen passed. At the first examination for degrees in February two candidates presented themselves. Both passed. The Reporter reviews the state of the Presidency College which is satisfactory, of the Normal school which contains 496 pupils, of the Provincial schools now educating 822 lads, and of the six Zillah schools attended by 859 lads. All are progressing satisfactorily but want efficient junior teachers. The medium of instruction in country schools is the vernacular, English being taught merely as a language. The Grants-in-Aid generally work well, and the gross amount is

to be raised to Rs. 65,000 a year. The number of Talook schools, including those which, under the designation of Tahseel and Samut schools, are supported by Government in the subdivision of the Rajahmundry District, has been raised to sixty-two. The average attendance is 79 per school. More and better Masters are required. It was stated in the last report that sixty-six Masters and eight Mistresses of village Schools supported by the Church Missionary Society and by the Gospel Society in the District of Tinnevelly, had passed the prescribed examination for the grants sanctioned by Government, with a view to the improvement of these Schools. One hundred and seventy-five other candidates for these grants have lately been examined by the Inspector, of whom eighty Masters and seventeen Mistresses of Schools supported by the Church Missionary Society, and thirty-five Masters and six Mistresses of Schools supported by the Gospel Society, or one hundred and thirty-eight in all, have passed the prescribed standard. The Inspector states that the number of pupils under the instruction of the Masters and Mistresses who have been examined by him, amount to nearly 3,500, exclusive of those who are under the instruction of the teachers to whom grants were awarded last year. In the course of his tour he examined many of the Schools, and reports very favourably of their condition. There are 99 village Schools in Rajahmundry, and it is proposed in the Ryotwaree Districts to pay the indigenous Schoolmasters 2 Annas a month for every pupil who is able to read and write tolerably well, to work sums in the first four rules of arithmetic, and who evinces some knowledge of grammar and of the geography of India; and at the rate of one Anna for each pupil who, though not coming up to the above standard, has received regular instruction. Three vernacular Normal Schools are shortly to be established. The preparation of vernacular School books advances, and Schools have been established for the wild tribes of Ganjam and the Neilgherries. A primary Medical School has also been instituted to prepare candidates for the Medical College.

Public Works. This department has been restricted both as to expenditure and strength, in consequence of the Mutinies. The former was cut down from Rupees 64,19,784 or £641,978 to 38 lakhs or £38,000 on all kinds of Public Works, and the latter was reduced by nearly 25 per cent. of its entire strength, or in salaries from 16,01,454 Rupees to 12,60,810 Rupees per annum. By these means the actual operations of the year have of course materially suffered, having in fact been strictly confined to Military works, and to some few others of an indisputably emergent character. Repairs to works of irrigation have proceeded, and the total expenditure has been

I. New Works.

For irrigation works, ...	4,38,108
Communications, ...	4,96,080
Buildings, ...	11,38,607
Total, Rupees	20,72,795

II. Repairs.

For irrigation works, ...	12,70,656
Communications, ...	5,34,757
Buildings, ...	2,08,817
Total, Rupees	20,14,230
Grand Total, Rupees	40,87,025

Details of works done are supplied,

Railways. On the 7th May 1857, 15¼ miles of the S. W. Railway, between Armoor and Vellore, were completed and thrown open to the public; and a similar distance from Vellore to Goriattum was very nearly ready at the close of the official year, and has since been opened. The entire length of line now open to the public is 96 miles, and the following statement will show the extent to which they have availed themselves of it.

Half-year ending 31st December, 1857.

	Passengers. Number.	Receipts.
1st Class ...	611	3,604
2nd „ ...	2,836	6,521
3rd „ ...	97,343	88,771
	Merchandize.	
Maunds sent on private account ...	5,38,499	
Receipts ...	66,722	

Marine. The Survey of the Malabar Coast is finished. 29,000 soldiers have been moved by sea. Two Steamers were purchased for Madras of 1,166 and 796 tons, but they were incorporated with the Indian Navy and sent to Calcutta. Government therefore engaged Steamers. The iron screw pile pier is to be built within two and a half years for £103,610.

Revenue. The following are the estimated charges and revenues of the Presidency for 1857-58 :—

Statement of Estimated Revenue and Charge for 1857-58, *shewing the proportions which the charges of each Department bear to the aggregate income.*

Income.	Total Estimated Amount for 1857-58.	Per centage, *i. e.* the proportion yielded by each separate source of Income.	Charge.	Total Estimated Amount for 1857-58.	Per centage, *i. e.* the proportion of Income allotted to each branch of charge.
Land Revenue ...	2,72,45,670	66¼	Territorial and Political Disbursements; *i. e.* Carnatic stipends ..	46,44,500	8¼
Salt	54,50,600	9¾	Tanjore stipends, Compensation, Pensions, &c.		
Tribute	34,46,430	6¼	General charges, *i. e.* Salaries and Establishments in General Department, Public Instruction, Mint, Charitable contributions, &c.	59,93,700	10¼
Abkarry	25,48,520	4½			
Land and Sea Customs	13,59,220	2½	Judicial, of which Supreme Court itself is Rs.		
Moturpha	10,72,270	2	1,64,500, and Magisterial charges at the Presidency,	5,34,300	1
Stamps	6,17,100	1	not including the Sudr. and Foujdary Adawlut ..		
Postal Collections ...	3,78,600	¾	Court of Sudder and Foujdarry Adawlut, and		
Miscellaneous, *i. e.* Abkarry Collections in the Military Department, Extra Revenue, Fees and Fines in the Judicial Department, Mint, Seignorage, Local Funds, &c. &c.	12,78,090	2¼	the Judicial Magisterial charges in the Provinces, of which Sudder Adawlut is Rupees 2,23,500 ..	36,63,800	6½
			Revenue charges, or charges collection of different sources of Revenue, of which Revenue Board is Rupees 2,20,500 ...	54,20,200	9¾
			Marine charges, *i. e.* Establishments, &c. of the Marine Board, Master Attendant, Coal Establishments at Out-Ports, &c.	3,58,200	⅝
			Military Charges.		
Extraordinary Receipts, or sales of Provisions, Stores, Horses, refunds of charges, &c.	18,36,300	3¼	European Force ...	46,19,200	8¼
			Native do. ...	1,31,06,150	23½
			Miscellaneous	1,59,17,750	28¼
			Total Rs. 3,36,73,100, or 60¼ per cent.		
Profit and Loss ...	6,99,200	1¼	Public Works Ordinary, *i. e.* for Repairs, also		
	5,59,32,000	100	Salaries and Establishment	36,15,500	6½
Expected Deficit of Receipts ...	48,60,000	8¾	Extraordinary Charges	3,17,600	⅝
			Public Works Extraordinary, *i. e.* charges for construction works ..	21,55,100	4
			Profit and Loss, *i. e.* Loss sustained in rates of Exchange, &c.	86,300	⅛
Rupees ...	6,07,92,000	108¼	Rupees ..	6,07,92,000	108¼

The deficit is chiefly caused by the addition of six Infantry and one Cavalry Regiment (Queen's) to the Madras establishment, and an increase of 300 men per Regiment to the Native Army. A loss this year of ten lakhs is expected on the land revenue, the season having been most unfavourable. The General charges also will have increased by 7½ lakhs principally from payments in the item of Carnatic stipends. The deficit has been met from the cash balance in hand at the beginning of the year 1857-58, or 283½ lakhs.

The Madras Mint has turned out 500 lakhs of pieces during the year, of which 96,21,933 were silver coins. The steam mills for lamination are still under construction.

Political. The Presidency, despite the Mutinies, was tranquil. In Triplicane there was an amount of discontent which rendered it necessary to place Military posts in the town, and a pre-meditated Mopla rising was prevented by the promptitude of a Naik Head of Police. In the Northern part of Canara, bordering on this country, it had been found necessary as early as September 1857, to call in the aid of the Military on the frontier; and in February last, a more serious danger appeared in the escape of the three sons of Phond Sawunt, who headed the rebellion in Sawunt Warree in 1845, from the Goa country, in which they had since resided under surveillance, and their appearance in the very difficult jungly country in the extreme North-west corner of Canara, at the head of a large body of insurgents, where, by their conduct they soon showed that the movement was of a political character, and aimed against the Government. They were not altogether unsuccessful in obtaining sympathy and aid from the inhabitants of that wild tract of country, and for some time, aided by the natural difficulties of the position they had occupied, maintained with some degree of success a kind of Guerilla warfare against the troops employed against them. At no time, however, did the insurrection attain any alarming extent, and eventually the insurgents were driven from the Canara country, and it is supposed are now lurking in the ravines and jungles skirting the Sawunt Warree country, and that of the Kolapore Rajah.

Military. The conduct of the Madras Army, one regiment excepted, was exemplary. This exception was the 8th Light Cavalry which refused to leave Madras without the old rates of pay. But here their misconduct ended. Their horses and fire-arms were taken from them and shipped to Bengal; some of the Native Officers and Non-Commissioned Staff were dismissed for neglect of duty in allowing their European Officers to remain in ignorance of the temper and intention of the men, of which they themselves could not but have been aware, and finally after

the remainder of the corps had for some time quietly done dismounted duty at Arcot, the Regiment was broken up and distributed among the other Cavalry Corps, but nothing further of mutinous intention was at any time manifested by them, and here began and ended the sole instance of misconduct in the Madras Army during this year of trial, when it was by no means exempt from the treasonable temptations of emissaries of sedition from other quarters.

Medical Department. The 38 Dispensaries relieved 10,669 in-patients and 2,21,323 out-patients at a cost of Rs. 75,292-10-6 or 5 Annas 2 P. per patient. Of the in-patients, 843 or 7·9 per cent. died. The total number vaccinated was 3,74,643, at an expense of Rs. 12-13-0 per hundred. In the Jails the percentage of healed to strength was 150·2, of deaths to strength 7·7, and of deaths to healed 5·1. The ratio of deaths among the Europeans has been 2·3 per cent., and among natives 1·7.

The Government Museum now contains 38,000 specimens, and the number of visitors amount to 2,01,778 for the first six months of 1858. And here as an important work, publishing under the auspices of Government, may fitly be mentioned the Catalogue Raisonnée of the extensive and valuable Library of Oriental Manuscripts, now under the care of the Board of Examiners, and which is being compiled by the Reverend William Taylor. This Library comprises the collection formed by Colonel Colin Mackenzie, some time Surveyor General of India, which was catalogued some years ago by Professor H. H. Wilson; that of the late talented Dr. John Leyden, and a large and valuable collection made by Mr. C. P. Brown, recently a Member of the Civil Service of this Presidency, and presented by him in 1847. These two last collections, the catalogue of which is now being drawn up on a plan similar to that adopted by Mr. Wilson for the Mackenzie MSS., contain 2,603 MSS. in the Sanscrit language, written in the Telugu, Canarese, Malayalum, Oriya, Grandham, Devanagari, and Bengalee characters, and 1,943 MSS. in the languages and characters of Southern India and in Burmese.

ADMINISTRATION OF BOMBAY.

1857 58.

Civil Justice. The following is the number of suits decided during the year.

For Adjudication during the Year.		Decided on Merits.	Arrears.
	1857.	1857.	1857.
ORIGINAL SUITS.			
Civil Courts	135,863	82,843	24,477
Agency Courts ...	711	323	192
Revenue Courts ...	2,078	896	488
Total	138,652	84,062	25,157
APPEALS.			
Civil Courts	12,336	4,737	3,131
Agency Courts ...	15	4	8
Revenue Courts ...	447	176	194
Total	12,798	4,917	3,333

The number is a slight decrease on that of the previous year. The business of the Court of Small Causes in Bombay has continued to increase. The number of suits instituted in 1857-58 was 14,740, being an increase of 828 in comparison with the return of the preceding year. The amount in litigation was in 1857-58 Rupees 700,558, a sum which exceeded the amount of the preceding year by Rupees 46,170.

Criminal Justice. During the year 54,231 persons were brought to trial, of whom 14,156 only were acquitted; 33,367 were sentenced to flogging, fines, &c., 6,623 to imprisonment, 55 to transportation, and 30 to death. In the Bombay Presidency. town the diminution of crime is remarkable. Only 3 burglaries occurred, robbery with violence is suppressed, and only Rs. 60,395 stolen against 152,000 in the previous year.

The Police rendered excellent service throughout this eventful year.

Revenue. There has been on the whole an increase of Revenue.* The trade also has increased.

Value of the Trade of Bombay.

Imports.		Exports.	
Merchandize, Rs.	8,68,52,063	Merchandize, Rs.	12,39,26,545
Horses..... ,,	13,22,000	Horses..... ,,	
Treasure ..... ,,	7,49,85,973	Treasure ..... ,,	2,28,27,054
Total..... ,,	16,31,60,036	Total ..... ,,	14,67,53,599

Imports.		Exports.	
1857-58 Rs.	16,31,60,036	1857-58 Rs.	14,67,53,599
1856-57 ,,	14,48,46,391	1856-57 ,,	12,57,93,939
	1,83,13,645		2,09,59,660

Financial. The following are the charges and disbursements of the year.

	Disbursements.			Receipts.		
General Department	1,08,90,023	7	2	31,12,059	12	0
Judicial Ditto	44,44,124	4	9	4,66,903	13	5
Revenue Ditto	1,31,76,784	15	0	5,13,87,557	0	8
Marine Ditto	55,32,664	2	9	4,94,872	11	10
Military Ditto	2,79,59,246	3	5	11,84,023	8	3
Tributes	1,37,154	11	0	8,94,403	15	7
Public Works Dept.	41,70,214	5	9	2,76,489	11	0
	6,63,10,212	1	10	6,08,16,430	8	9
	6,08,16,430	8	9			
Deficit Rupees	54,93,781	9	1			

A permanent increase of 62,64,808. has been made in the European and Native troops.

Political. In Bombay the disturbances with which the Government had to deal may be represented by the indefinite term "outbreak," rather than the specific term "mutiny," or the more important designation "rebellion." It has been a rising of the many rude and turbulent races which are scattered over the Presidency; a rising of Rajpoots, Bheels, Koolies, Rammosees, Mangs, and Beerruds; of classes which rush into excesses merely because order is threatened by other causes; by the mutiny of a Regiment, or by the rebellion of a Chief; who have no specific

* No revenue accounts given.

grievance to allege, and no definite object in view. They do not seek to substitute one government for another, but merely those gratifications which may be supposed to arise from the destruction of all government. It is obvious that when treason is contemplated, designing men can readily find their tools among this portion of the population. The people of the Punch Mahals in Guzerat, formerly belonging to Sindia, broke out and proclaimed the Emperor of Delhi; the insurrection was checked by a rapid march of Captain Buckle from Baroda, and the insurgents fled into Malwa. Various petty outbreaks occurred in Rewa Kanta, all suppressed. On 18th February it was decided to disarm Guzerat; Broach, Surat, Kaira, and Ahmedabad were disarmed, and the whole of the Guicowar's dominions. The Mahee Kanta and Rewa Kanta were also disarmed, and though the measure has not been entirely carried out, the practice of carrying arms has been discontinued. In Khandeish, Asseerghur a most important fortress was seized, and Khajee Singh a Bheel Chief who seized 8 lakhs of treasure and raised a force of 5,000 men, was on 10th April defeated at Amba Panee by Major Evans. Several outrages were committed by the Bheels both in this District and in Penth, but they were all suppressed. A plot in Satara was also detected, its originators executed, and the Satara family who were deeply implicated removed to the coast.

In Kolhapoor a party of discontented men, instigated, it is believed, by a younger brother of the Raja, and a large body of Rammosees, Mhars, and Mangs, entered the city very early in the morning of the 5th December, while it was still dark, and closed the gates. The Raja shut himself up in his palace. Colonel Jacob immediately called the troops to arms, proceeded at daybreak to the city, blew open the principal gate, and entering, bore down all opposition with the bayonet. The insurgents were dispersed in all directions; fifty-three taken red hand, were tried by a drum-head Court Martial, and executed on the spot. These prompt and decisive measures crushed the spirit of rebellion in Kolhapoor, and what would in all probability have been the commencement of a formidable rebellion not only in that State, but in Satara and the Southern Muratha country, was effectually repressed. Disturbances occurred also in Sawunt Waree where the Sawunt Dessayes broke into rebellion, resisted the troops, but were finally driven into Goa where they surrendered and were transported by the Portuguese Government to Timor. In April, the Acting Political Agent, Mr. Manson, obtained such proofs against the Chief of Jumkhundee, one of the powerful Putwurdhun feudatories, of complicity in plots against the Go-

vernment, that he arrested the Chief in his capital, and sent him to the Fort of Belgaum as a prisoner. The events which followed belong strictly to the year 1858-59, but they are so intimately connected with circumstances already adverted to, that they should be noticed in the present report. The Chief of Nurgoond, a Brahmin Jagheerdar, who had long been suspected of holding intercourse with Dhondo Punt Nana, imagining in the arrest of the Chief of Jumkhundee, and on a demand being made for the surrender of his guns, that proofs of his disloyalty had been obtained, broke out into open rebellion. Simultaneously Bheem Rao Mondurgee and some Dessayees in the Dharwar Collectorate, near Nurgoond, commenced hostilities. The Chief of Nurgoond waylaid the Acting Political Agent at Soorebund, near Ramdroog, on the 29th May, and murdered him with the small escort of horsemen who were with him. The revolt, which commenced with such atrocity, was rapidly suppressed. Bheem Rao Mondurgee and the Dessayee of Hembgee, threw themselves into the Fort of Copal, which was immediately attacked by a Madras column under Major Hughes. The fort was taken by assault, and both the leaders were killed. The Chief of Nurgoond was defeated under the walls of Nurgoond by a force under Colonel Malcolm. He then evacuated his fort, one of the strongest in India, and fled. Colonel Malcolm, who had stormed the town, then occupied the Fort of Nurgoond, and the Chief himself, after a long pursuit, was captured by the Superintendent of Police, Mr. Souter. He was brought to trial, convicted of murder and treason, and executed in Belgaum.

Military. The report describes the share taken by Bombay troops in the Campaign. Great exertions were made to obtain horses, and the following number was obtained.

Cape	1,170
Australia	750
Syria	140
Bagdad	290
Bombay Market	2,200
Kurrachee	1,115
Total ...	5,665

Survey. The measurement of the Ahmedabad Collectorate, with the exception of Alienated Villages, was completed, and a commencement was made in the Surat Collectorate, by placing two measuring Establishments in the Surbhon and Kurrode Pergunnahs. In Khandeish, Satara, Belgaum, and Tanna the progress of the Survey is satisfactory.

Municipal. No new works have been undertaken in Bombay from deficiency of Revenue. The amount raised during the year was 6,14,101, and the expenses Rs. 5,34,475 8-0 chiefly in repairs, watering, &c. The Bombay water works are advancing rapidly.

Medical. 2,54,638 persons have been vaccinated. 11,080 persons were treated in the Civil Hospitals of whom 1,322 died. The number of prisoners in the Jails of this Presidency during the year was 6,281, being 85 less than in 1856-57, and 100 less than in 1855-56. The number of cases treated in Hospital amounted to 10,316, being less than the previous year by about 302, and about 24 less than in 1855-56. The percentage was, in 1855-56, 162.0; in 1856-57, 171.5 ; and in 1857-58, 164.2. The deaths in Jail Hospital were 229, whilst the previous year they were 259, and in 1855-56, 230. The per centage of deaths was, in 1855-56, 3.5 per cent.; in 1856-57, 4.0; and in 1857-58, 3.6 per cent. The number treated in the Dispensaries was 101,836.

ADMINISTRATION OF BENGAL.

1857-58.

The Lieutenant Governor enters briefly into the history of the Mutinies in connection with Bengal. Behar alone had been seriously affected, but disturbances occurred in or extended to Bhaugulpore, the Sonthal Pergunnahs, Purneah, Chota Nagpore, Dacca, Nuddea, Burdwan, Rajshahye, Chittagong, and Assam.

Civil Justice. The following table shews the state of Civil business.

Number and Grade of Officers.				Original Cases.	Appeal Cases.
	European.	Native.	Total.		
Zillah Judges and Additional Judges,	30	...	30	98	4,545
Principal Sudder Ameens, ...	8	5	33	2,338	7,535
Sudder Ameens,	3	23	26	2,156	Not an appellate authority.
Moonsiffs, ...	6	184	190	79,684	
	47	232	279	84,276	12,080

N. B.—The Zillah Judges are occupied for nearly half the year in trying Criminal commitments and appeals.

Of the 4,545 appeals heard by the Judges during the year, 979 were decreed for the appellants, and 2,423 for the respondents; 581 were remanded, and 390 dismissed on default. The remainder were adjusted or withdrawn, or otherwise disposed of.

Of the 98 original suits heard by the Judges during the year, 41 were decided in favor of the plaintiffs, and 34 in favor of the defendants.

Of the 7,535 Appeal Cases enquired into by the Principal Sudder Ameens, 1,725 were decreed for the appellants, and 4,116 for the respondents; of the remaider, 1,103 were remanded, 483 dismissed on default, and 98 adjusted or withdrawn, or otherwise disposed of.

Of the 2,338 *original* suits, which came before the Principal Sudder Ameens, 1,157 were decided in favor of the plaintiffs, and 661 in favor of the defendants. The remainder were either dismissed on default, adjusted or withdrawn, and otherwise disposed of.

The number of suits which came before the Sudder Ameens during the year was 2,156, of which 1,657 were decided on their

merits, 54 dismissed on default. The remainder were adjusted or withdrawn, or otherwise disposed of.

Of the large number of 79,684 suits which came before the Moonsiffs, 49,584 were decided on their merits, and 6,591 were dismissed on default. The remaining cases, amounting to 23,529, were adjusted or withdrawn, or otherwise disposed of. The Sudder Dewanny Adawlut was about a year in arrears. The duration of suits shewed about the same average as in former months. The Lieutenant Governor reviews the business in each Non-Regulation Province.

Criminal Justice. The number of criminals apprehended was 92,688, an increase of eight per cent. on the previous year, to which must be added 2588 pending cases and 254 received by transfer. They were

Discharged without trial	1,188
Acquitted	27,125
Convicted	59,526
Committed to the Sessions	3,506
Otherwise disposed of	492
Under trial on the 31st December 1856 ...	3,693

Of the cases committed to the Sessions there were 18. 10 were sentenced to periods of imprisonment of from 12 to 16 years, 10 to imprisonment for life. 43 capital sentences were passed by the Nizamut, 344 were sentenced to transportation for life and 17 to imprisonment for life. The average duration of cases appealed to the Nizamut Adawlut was 211 days, against 198 days in 1856. The Additional Judges who were appointed to the special duty of working off the arrears of business in the Sudder Court, succeeded in bringing their duty to a termination by the close of the year under review. This result however was attained chiefly by four out of the five Additional Judges originally appointed; the fifth, Mr. E. A. Samuells, having been specially deputed on the 5th August 1857, to undertake the Commissionership of the Patna Division. Of the other four extra Judges, one has been promoted since the close of the year to a vacancy on the permanent bench, and the remaining three have been retained for the present to assist generally in disposing of the large amount of work before the regular permanent bench of five Judges. Additional English writers have been appointed in Magistrates' Courts at a total expense of Rs. 806-2 a month.

Police. The statistics under this head are reported district by district, and are all of a very minute character. For heavy offences in Bengal were convicted

	Persons.
Murder	162
Wounding with intent	30
Attempt to	3
Homicide	195
Affray with	139
Assault with wounding	931
Abortion	18
Dacoity with murder	25
„ „ torture	3
„ „ wounding	138
„ simple	491

The position of affairs rendered it advisable that Military Police Corps should be raised, to cost Rs. 14,950 a month each. The existing local corps and burkundaz Guards were to be abolished, leaving a total increase of expenditure of Rs. 39,820 a month. The actual cost of the Battalions was to be Rs. 1,49,505 a month. A Sebundie Levy of 500 Goomsurs was also raised for Sumbhulpore.

Dacoity. The report of the Dacoity Commissioner is favourable. In the 24-Pergunnahs not one occurred, in Baraset 5, in Howrah 3, and in Hooghly where in 1852 there were 128, only 30. In this district dacoity is almost confined to four thannahs. The general result is a decrease in all the infected districts of from 219 outrages to 175.

Jails. On 30th April 1858, the number of prisoners in custody was 19,870, and the average cost of each prisoner Rs. 41-10-3-7. The most economical jail was Cuttack, in which each prisoner cost Rs. 28-9-5, and the most expensive the Kossiah Hills, which shews an average of Rs. 108-13-0-7. The differences are produced by the different cost of feeding and guarding. 5,671 criminals were employed in handicrafts, who made articles worth Rs. 2,35,471, with a profit of Rs. 1,11,799. One-fifth the cost of the jails was returned by the labour of the convicts. Printing has been successfully introduced into Alipore Jail, and Dr. Mouat states, that inclusive of manufactures, the total value of the convict labour employed on roads, public works, in the performance of the duties of Jail servants, and in miscellaneous works inside or near the Jail, amounted to Rupees 4,21,085-4-6¼. The actual mortality of the year was 1,727 per cent. of those confined, the mortality of the daily average number in custody was 12.099 per cent., the whole number of deaths being 2,120. Escapes were numerous, the Shahabad, Gya, and Hazareebagh Jails having been broken open by mutineers; 1,612 convicts were let loose of whom 956 have been recaptured.

The Sonthal Pergunnahs remained quiet—a strong testimony in favour of the new system. Heinous crime has much diminished. The system of recording evidence in English succeeds, and so does the Police system which is based on the abolition of the entire class of Native Officials, Darogahs, Naib Sezawals, Mohurirs, Jemadars and Burkundazes, who used to stand between the European Officer and the people. In the place of them the prevention and detection of crime is now entrusted to the Manjee or Head-man of the village, that official being subordinate to a class of persons styled Pergunnites (from their jurisdiction over a large number of villages), and they again under the control of the European Assistant or Sub-Assistant Commissioner. Two roads, one from Sooree to Bhaugulpore, 110 miles in length, through the heart of the Sonthal Pergunnahs, and one from Bugadhur Chuttee, on the Grand Trunk Road to Kurruckdea, in the Chota Nagpore Division, about 30 miles in length, have been completed. The Churruck Poojah has been suppressed. The one school at Burhait is fairly attended.

Revenue. The land revenue of the year was a little affected by the Mutinies, but the collections amounted to Rs. 3,76,84,352 leaving balances of 33,61,065 only to be collected. The next revenue from customs, salt included, amounted to Rs. 1,24,65,432, and the gross revenue to Rs. 1,29,97,753. The tonnage of the year included

	Vessels.	Tons.
Arrivals	1,028	7,14,529
Departures	967	6,58,149
Total ...	1,995	13,72,678

The subjoined statement shews at one view the progress for the past 5 years of the External Commerce of Bengal:—

IMPORTS.

	1853-54.	1854-55.	1855-56.	1856-57.	1857-58.
Merchandize... ...	5,58,98,251	6,63,22,292	8,06,08,182	8,02,41,782	7,40,74,214
Treasure	2,12,90,787	64,08,606	5,81,00,445	6,67,60,533	7,80,70,887
Total	7,71,89,038	7,27,30,898	13,87,08,627	14,70,02,315	15,21,45,131

EXPORTS.

	1853-54.	1854-55.	1855-56.	1856-57.	1857-58.
Merchandize ...	10,67,70,907	10,72,10,593	12,60,92,637	13,66,47,918	13,38,10,495
Treasure	74,33,758	1,20,54,114	1,14,28,310	99,89,581	85,96,918
Total	11,42,04,665	11,92,64,707	13,75,20,947	14,66,37,499	14,24,07,413

The receipts from Salt amounted to Rs. 1,02,60,626, and the expenses to 39,27,445, leaving a net revenue of Rs. 63,33,181. Of Opium :—

	1855-56.	1856-57.	1857-58.
Receipts	4,17,44,360	3,82,95,779	5,22,37,979
Charges	1,25,33,819	1,12,68,133	90,20,948
Net Revenue ...	2,93,10,541	2,70,27,646	4,32,17,031

The Abkaree yielded, exclusive of Opium, Rs. 30,06,384 and with it 41,32,651, while stamps returned 21,45,156. The value of stationery purchased for the year was Rs. 5,19,569.

Education. Examinations for University degrees were held this year in the Faculties of Arts and Law. Thirteen students passed the examinations. They all went up from the Presidency College. Twenty-four students of the Medical College also passed the "first examination" for the degree of "Licentiate of Medicine," and four of the number obtained University Scholarships. The English Colleges are generally in a satisfactory condition, but the Report of the Government Examiner on the English Class of the Medical College is not altogether as satisfactory as could be wished; only seven students having presented themselves as candidates for the Diploma of Sub-Assistant Surgeon, and only four of these having obtained it. It is proposed to grant pensions to Sub-Assistant Surgeons, and to compel students, who quit the College before their time has expired, to pay Rs. 5 a month, retrospectively, for the time of their gratuitous instruction. An Inspector has been appointed to inspect schools in Cuttack. The Patna High School for Behar at Patna has been abolished, the people not attending it. For the rest the order stopping all further expenditure on Education has been a bar to all further progress.

Marine. The strength of the Pilot Service on 30th April 1858 was as follows:—

8 Full.
4 Acting Branch Pilots.
23 Full.
7 Acting Master Pilots.
1 Mate River Surveyor.
14 Mate Pilots qualified as Masters, receiving 3-10th Pilotage.
1 Mate Licensed Master, receiving 2-3rds Pilotage.
30 Full and Acting Mates.
6 Acting Mates.
39 Volunteers.

133
14 On leave.

147 Total.

There are also 8 licensed pilots. 127 cases of grounding and 23 of collision occurred in the year. The steam boats belonging to Government on the rivers are

Steamers
"Thames."
"Jumna."
"Megna."
"Berhampooter."
"Hoorungotta."
"Koel."
"Koladyne."

Twin Ferry Boats
"Benares."
"Patna."

Flats.
"Mattabangah."
"Kaligunga."
"Goomtee."
"Soorma."
"Dallah."
"Gunduck."

The private river steamers were employed to a large extent during the year by Government. Considerable progress has been made in the preparations for the formation of the proposed town of Mutlah. All the khalls in Government ground have been bunded, and substantial embankments have been thrown up round the whole of the Government land. The tide

being thus shut off from a large portion of the proposed new settlement, a marked improvement in the salubrity of the place has already been the result. One of the tanks, ordered by Government, has been dug, another is rapidly approaching to completion.

Only four vessels of the aggregate burthen of 2,164 tons entered the port during the year. Two of these were from Liverpool, having salt cargoes (maunds 48,564) on board, of which the greater portion was brought up in covered boats, and landed at Sulkea, and the rest either stored in the Mutlah Golahs, or delivered there to merchants under permits granted by the Board.

Public Works. 37 lakhs of Rupees were spent during the year, but the details cannot be shown in consequence of arrears in the department. The chief works carried on were barracks for Europeans. Several roads have been improved. As was shewn in last year's Report, a sum of Rupees 4,70,687 was allotted to the several District Ferry Fund Committees and Magistrates, for expenditure on works and establishment, out of the total sum of Rupees 6,02,108-2-5 which was available for the Ferry Fund operations of 1857-58. From the balance afterwards remaining there were expended in the course of the year, in special grants, Rupees 95,862-14-9, thus raising the total expenditure of 1857-58 to Rupees 5,66,549-14-9. The outlay of this large amount in the execution of the local works required in each District, has been, upon the whole, very judiciously administered :—

Divisions.	Districts.	Amount Assigned for 1857-58.	Amount Assigned for 1858-59.
Chittagong.	Chittagong ..	Nil.	10,000
	Noakholly ..	5,000	8,000
	Tipperah ...	2,400	Nil.
Nuddea.	24-Pergunnahs ..	11,200	45,000
	Barraset ..	13,620	20,000
	Nuddea ..	31,000	31,000
	Moorshedabad ...	15,000	27,500
	Jessore ...	12,000	20,000
Bhaugulpore.	Bhaugulpore ..	23,000	43,500
	Monghyr ..	23,000	Nil.
	Purneah ..	2,000	4,500
Burdwan.	Bancoorah ..	Nil.	15,000
	Beerbhoom ...	17,100	20,000
	Burdwan ..	10,800	8,000
	Hooghly ..	17,308	20,000
	Howrah ..	5,000	5,000
	Midnapore ..	10,900	10,000
Patna.	Patna ..	30,000	20,000
	Tirhoot ..	50,000	50,000
	Sarun ..	30,372	25,000
	Chumparun ...	28,000	15,000
	Behar ...	Nil.	15,000
	Shahabad ..	Nil.	25,000
Dacca.	Mymensingh ..	12,400	10,000
	Furreedpore ..	10,837	10,000
	Dacca ..	8,000	10,000
	Backergunge ..	Nil.	Nil.
	Sylhet ..	Nil.	Nil.
Rajshahye.	Dinagepore ...	11,550	11,581 13 0
	Malda ...	10,400	12,000
	Rajshahye ...	40,000	15,000
	Rungpore ...	7,400	14,000
	Pubna ..	12,400	12,400
	Bograh ..	20,000	2,051 6 5
Arracan.	Akyab ..	...	2,400
	Akyab Town and Island	...	23,151 4 11
	Ramree ..	...	1,000 0 0
	Sandoway ..	...	134 8 8
	Total Rupees...	4,70,687	5,61,223 1 0

The Municipal Revenue of Calcutta for 1857 amounted to Rs. 6,62,415, and the expenditure to Rs. 6,00,484, but of this sum only Rs. 4,67,879 was applied to general conservancy purposes. It was decided to light the town with six hundred gas lights and 1,000 oil lights. The cost of a gas lamp is Rs. 90 a year. The total expenditure on gas is Rs. 31,321, and the produce of the rate Rs. 64,618, Rs. 1,24,578 have been spent on the cleansing of the town, and Rs. 89,968 for repairing the roads. The Hindoo Burning Ghaut has been rebuilt, the receiving house improved, and two new streets opened. The mortality for the year amounted to

Christians of all denominations	803
Hindoos	13,266
Mahomedans	4,435

The census of 1850 gave the population at

4,848 Male	}	Europeans.
2,686 Female		
2,472 Male	}	Eurasians.
2,188 Female		
499 Male	}	Armenians.
393 Female		
699 Male	}	Chinese.
148 Female		
8,225 Male	}	Asiatics.
7,229 Female		
1,65,817 Male	}	Hindoos.
1,08,689 Female		
72,476 Male, ...	}	Mahomedans.
38,694 Female		
Total 4,15,063		

Thus Hindoos die at the rate of 4.83 per cent., Mahomedans at 99 per cent., and Christians 6·20 per cent.*

Emigration. 13,539 souls, of whom 3,838 were women and 2,016 children, emigrated to Mauritius and the West Indies, and 4,293 returned. They always return with means, and often emigrate twice. There are 80,000 emigrants in the Mauritius, and about 25,000 in the West Indies. The usual rate of mortality for the six years preceding 1856-57 was 3·7 per cent., but in that year it rose to 17·6 per cent., and Dr. Mouat was ordered to enquire into the cause. He reported, after careful investigation, that the lamentable sickness and mortality were caused by the increased proportion of women and children; by the neglect of proper sanitary precautions on board

* This includes, apparently, soldiers and sailors.

most of the vessels; by the shipment of water of the River Hooghly when it was unwholesome; by the absence of the means of separating the healthy and the sick; by the change in the diet of the emigrants; by the absolute want of suitable food for young children and infants; by the presence of grain cargoes; by the probably foul state of the bilge; and in some instances, he feared, by the inexperience of the Medical Officers, in others by their being unable to communicate with the emigrants, and being unaccustomed to the treatment of the diseases of natives of India.

Survey. The Districts now completed are Chittagong, Midnapore, Hooghly, Shahabad, Sarun, Patna, Monghyr, Behar, Purneah, Tirhoot, Maldah, Bhaugulpore, 24-Pergunnahs, Rajshahye, Beerbhoom, Baraset, Nuddeah, Moorshedabad, Pubna, Bancoorah, Bograh, Mymensing and Burdwan. The Province of Arracan, and the Districts of Jessore, Rungpore, Dinagepore, and Dacca, are now in hand.

Lunatic Asylum. The transfer of the European Asylum to the direct control of Government has proved profitable, 95 patients cost in 1857 only Rs. 39,210. Larger buildings are required. The Native Asylum at Dullundah contained during the year a daily average of 288 patients.

The following table shews the expenditure of the Province in all Departments during the year :—

Post Office, ...	10,13,888	13	8
Stamp, ...	48,077	10	4
Educational, ...	10,32,278	11	5
Ecclesiastical, ...	2,69,721	14	1
Medical, including Vaccine, ...	4,02,541	3	9
Miscellaneous, ...	21,79,032	14	9
Land Revenue, ...	25,40,716	7	3
Salt, ...	8,95,660	14	0
Opium, ...	7,17,325	2	6
Customs, ...	5,39,304	10	8
Abkaree, ...	2,67,118	5	7
Sayer, ...	1,353	12	6
Survey, ...	5,09,828	13	3
Miscellaneous, ...	2,22,691	4	10
Civil and Criminal, ...	67,22,463	3	2
Miscellaneous, ...	2,99,361	15	2
As per Chief Engineer's Accounts, ...	...	...	...
Ditto other Accounts, ...	14,88,257	11	8
	1,91,49,623	8	1

ADMINISTRATION OF THE NORTH WESTERN PROVINCES.

1857-58.

THE materials for preparing a report for 1856–57 were lost in the Mutinies, but they were of little importance, referring chiefly to improvements in detail. For the present year, 1857-58, of the ordinary operations of the Government, beyond the administration of criminal justice and the collection of revenue, there will be found but little to report. All else was paralyzed by the Revolt. Public works, save for military objects, may be said to have ceased entirely. The Surveys were suspended, and the entire staff of one of them was destroyed with its records. The administration of civil justice barely survived in a few isolated localities. The canals were nearly inoperative, and other works of irrigation and drainage, except in Ajmère, completely suspended. Education, and all measures for advancing the moral and physical welfare of the people, have been, in most quarters, altogether stopped or materially interrupted. On the other hand, the political and military functions of the Government have swollen into an unusual importance: so numerous and urgent indeed were the references to the Lieutenant Governor of the North-Western Provinces on matters purely military, that it became expedient to vest the entire Government temporarily in the hands of a military man; but it will be unnecessary to dwell on this portion of the administration, as it was of a peculiar and extraneous nature, for the most part unconnected with the general topic of Civil government, and belonging more properly to the history of the Revolt itself.

Civil Judicature. The Civil Courts were almost paralyzed by the convulsions of the year.

Criminal Justice. The administration of criminal justice was almost exclusively conducted under authority of the Special Commissions, issued under the penal Acts passed by the Legislature after the Mutinies broke out. The prevalence of disturbances throughout the country, and of disaffection and treachery in many parts, rendered necessary a celerity and severity of punishment, such as the ordinary laws were unable to inflict. Martial Law having also been proclaimed throughout the country, the functions of the ordinary Courts were greatly circumscribed, and often, for a time, altogether superseded. The Executive Officers were, however, strictly enjoined to remit all trials when possible to the Judge. On 26th April the Special Commissions in the Meerut Division were restricted

to the trial of offences against the State, and on 8th July this order was extended to the Agra Division. It was much later in the year before the Governor General was able to extend a similar measure to the Divisions of Rohilcund, Allahabad, and Benares, and it was not till the 14th January 1859 that the remaining districts of Goruckpore, Jubbulpore, and Jhansie Divisions, were brought under the same rule. The General Order, which prescribed the policy to be followed in Rohilcund, was circulated to all Commissioners and District Officers as a guide under analogous circumstances. It distinguished widely "the simple-bearing of arms, or even acts of social violence, committed at a period when the check of lawful Government was removed, from acts directly involving treason against the State, or a deliberate defiance of its authority;" and declared that "excepting instances of much aggravation, it was not the wish of Government that public prosecutions should be set on foot on account of offences of the former class." In respect of political offences, it limited the suit of Government to leaders and instigators, to those who "had distinguished themselves by activity and rancour against Government, or by persistence in opposition to its authority after the advance of troops, and the re-occupation of stations." The total number of persons punished under the Special Commissions up to the Amnesty was 7689, of whom 2694 were capitally sentenced, 579 transported, and 2486 imprisoned. Of the whole only 209 were sepoys. The Governor General remitted sentence of death in five cases only, and of imprisonment in 240. In submitting the above statements of the decisions of the Special Commissioners, it must be borne in mind that they by no means present a complete view of the results of criminal justice for the year. Martial Law prevailed throughout the length and breadth of the land; in all quarters many offences of strictly civil character were tried by Military Courts; in some districts almost all heinous offences were for a considerable time so disposed of. No return of these sentences has yet been obtained from the Military authorities; and without it the statement of punishments as above given is altogether imperfect; it can be viewed as showing the operations of only one branch of criminal machinery. It is also to be noticed that the returns are exclusive of trials by the Special Commission given by the Supreme Government to Mr. J. C. Wilson, and his subordinate officers, for the trial of mutineers and rebels.

Police. The Police of all grades, and all degrees of standing in the Service, universally sympathised with the mutineers. They were replaced, on the restoration of order, by a Military,

Police of one battalion of Infantry and Cavalry to each division. The total force thus raised amounted to 17,500 Native officers and men, costing £150,000 a month (?) The proportions of race and creed are as follows, each company being composed of men of one caste or race. Of Mahomedans, Jats, Brahmins and Chuttrees, there are about an equal number. The remaining Hindoo warlike classes are recruited from, in the proportion of three low caste men to two high caste men; the aggregate of the latter being three times that of the hill men. The Sikhs in number are double the hill men, and approximately speaking, about a sixth of the whole force. It is intended that the total strength shall be about 24,000, and since the population of the North-Western Provinces may be approximately taken as 30,250,000, and its area as 1,08,000 square miles, this calculation would give an average of one policeman to about every 1,260 of the inhabitants of the Provinces, and one to about every 4½ square miles.

Jails. Out of 43 Jails in the North West, 34 were broken. Most of them are being repaired.

Revenue. The losses to the Revenue were chiefly in Rohilcund and districts entirely occupied by the rebels. The year's demand was

	Demand.	Receipt.
Land	4,20,63,102	3,11,33,627
Abkarce	14,38,675	10,34,464
Stamp	... ...	4,08,596
Sayer	... ...	36,551
Customs	... ...	8,76,456
The Losses throughout the N. W. P. amounted to		
Cash	... ...	83,61,887
Stamps	... ...	1,65,482
Postage	... ...	1,437
Opium	... ...	6,269
P. Notes	... ...	2,68,000

The balances are being reduced, and it is expected that the actual deficiency will be less than half a million.

Education. The district Union Schools are the foundation of the educational system. These Schools, carried on under the management of the towns-people and villagers themselves, educate, as far as can be ascertained, about 3½ per cent. of the country youth, at an average cost of Rupees 3-13-6 per boy, (independent of prizes contributed by Government), of which all but 2·54 per cent. is borne by the parents of the boys themselves. At the end of the year 1856, the Tehseli Schools, 69 in number, were attended by about 67 boys each, or by about 1 in

every 200 of the youth of the two divisions. In April 1858, a diminution of 1,500 scholars appears to have taken place; the annual cost of each boy being about 4-4 Rupees of the entire expense. The Colleges are in a satisfactory state. The female schools established in the Agra and Muttra districts disappeared during the year of disturbances. The sums devoted to education under the system lately in force were assigned, as it has happened, entirely to institutions supported by Christian Missions, and amounted during the year 1856-57 to Rupees 31,272, of which the Church Missionary Society engrossed three-fourths; and from May until December 1857, Rupees 4,405 were disbursed, since which, grants amounting to Rupees 16,972 have been sanctioned. The pupils in these Schools amount to 1,135, two of them being attended exclusively by Christian boys; all others, with one exception, impart Anglo-Vernacular education.

Public Works. Where the rebels had unchecked power many buildings were malignantly destroyed. Even dispensaries suffered, sometimes from the men relieved in them. They will be restored. Defensive works were thrown up at almost all stations, and at Benares the work is of an important Military character. The toll bars were generally torn down, but have been restored; a bridge of boats has been thrown across the Ganges at Benares; the Local Committees have been reorganized. The canal administration in the North-Western Provinces during the past year necessarily presents few points whereon to touch in a report such as this. The whole system from Kurnaul to Cawnpore, of Jumna and Ganges Canals, with their adjuncts, and the minor Irrigation works in Rohilcund and other Divisions, were exposed to the full effects of the disturbances resulting from the mutinies. Up to the time of the capture of Delhi, and the consequent release of detachments of troops for the pacification of the surrounding districts, little was done towards re-organizing the Irrigational establishments, and repairing the damage done on the East and West Jumna Canals, and by the close of the official year, the Ganges Canal had only just been rendered permanently secure from disturbance, and the necessary repairs effected of such damage done by insurgents as effected the preservation of the works alone its course, while Rohilcund had been only recently re-occupied, and Bundlecund was still in a state of prevailing anarchy. The works of the canals were not much or generally injured, but of the 202 boats belonging to Government on the Ganges Canal, previous to the outbreak, 90 were entirely destroyed, and 42 others rendered temporarily unserviceable. The demand for these boats from

private parties has since sprung up to a height the Canal department could not supply. They have been requested to supply their own boats, the charge for the right of navigation being reduced to Rs. 4 per mensem. It is hoped that the destroyed records may be recovered. The demand for water has been very large. The Deputy Commissioner of Ajmere, whose report has been separately published, thus sums up—"To one who knows the impenetrability of a dense jungle, even to the sight, and the difficulty of persuading wild races to take to agriculture, and to change entirely their habits and mode of life, I think the contemplation of an Officer pitching his tent in the midst of a wild jungle, declaring to his servants that he would make that valley's name Meejwar; and at once, within a few days, marking off in the thick forest, the positions of no less than 45 bunds and eveirs, some of them of large dimensions, which he considered would accomplish the object intended, certain that population would flow to the spot, is worthy of the highest admiration, and this is what Colonel Dixon did without any one by to cheer or encourage him.

"That portion of the country is now one mass of the richest cultivation. Often in the evening did the Mairs show me gorges, where they considered new Talaos might be constructed with advantage; but with the exception of two spots (one where there is already a small dam, and one where a land dispute prevented the construction of a lake), I did not see in that neighbourhood a single place where an extra Talao would have been of the slightest benefit, nor was there a single work constructed that did not accomplish some highly useful end; so strong is the desire for these works amongst the population, that many have undertaken the construction of large bunds, unaided by Government, thus exhibiting a most useful public spirit, and a self-reliance on their own exertions, which does honor to this wild but interesting community."

Steam Navigation. Three steamers have been pushed up the Gogra, and the navigability of that river demonstrated.

No census was of course taken and no steps for improving agriculture; the Forest work and mining was suspended and the vaccine department ceased its operations. Hospitals and dispensaries shared the general destruction, but were very rapidly restored.

Miscellaneous. A Department of Supply, under Civil Officers, was established towards the close of 1857, in the Central Provinces, as auxiliary to the ordinary Commissariat. The department supplied:—

Carts supplied to Government ...	14,008	Hired	2,601,	Total	16,609
Bullocks (draught) Government ...	36,386	„	7,233,	„	43,619
Ditto (pack) „ ...	388	„	68,	„	456
Ditto (slaughter) ...	3,350	„	„	„	3,350
Rations supplied	...	...	...	...	68,465
Sheep ditto	...	...	...	...	7,114
Servants ditto	...	...	...	...	7,920
Grain, of sorts, maunds	...	...	...	...	88,164

The cost of these operations was approximately Rs. 15,13,829.

ADMINISTRATION OF PEGU.

1857-58.

THE area of Pegu is 32,250 square miles, the population 840,203, and the revenue 41,50,270, raised from

Land	12,59,915
Capitation	8,57,364
Customs	8,12,451
Fisheries	3,33,675
Abkaree	3,25,333
Miscellaneous	5,61,532

Civil Justice. 19,982 suits and 614 appeals were instituted during the year, on the following subjects:—

Nature of Suits.	No. of original Cases.	Appeals.
Debt	8,689	235
Divorce	2,674	20
Land	1,634	162
Execution of Decrees	1,200	0
Miscellaneous Cases	5,785	197
Total	19,982	614

Of the original cases 13,809 were decided on trial, 9,571 in favour of the plaintiff, and 4,238 for the defendant. The remainder, or 5,862 cases, were settled between the parties. Of the appeals, 255 were decided in favor of appellants, and 312 in favor

of respondents, 41 were settled between the parties or withdrawn. It has been recommended that an additional Deputy Commissioner should be appointed for Rangoon exclusively for Judicial Work.

Criminal Justice. There has been considerable increase of violent crime, no less than 63 cases having occurred of murder or attempt to murder. In the whole 14,297 persons were brought to trial, 8,670 convicted, and 5,190 acquitted, the rest escaping, being transferred, or remaining for trial. The amount of property stolen was Rs. 1,56,478, of which 43,715 or 28 per cent. was recovered. The number of persons committed to the Commissioner's Court for heinous crime was 126, of whom 19 were convicted and 45 acquitted. Of the 19 only one was executed. To render the administration of Justice more prompt, as well as to relieve parties and witnesses from the harassment and expense of repeated attendance at distant Courts, the Supreme Government sanctioned an alteration in the conduct of sessions cases in the Province. The Commissioner is now empowered to dispose of certain cases committed to the sessions upon a perusal of the records of the Magistrate's proceedings, without holding trial, that is to say,—1*st.* In any case he may acquit the prisoner on the grounds of insufficiency of proof against him, or from other cause requiring his acquittal. 2*nd.* He may convict and sentence in any case in which a term of imprisonment, with or without labor, and not exceeding nine years, is considered an adequate punishment. 3*rd.* He may sentence without restriction, in all cases in which the criminal pleads guilty, and makes full confession of the crime imputed to him, such crime being otherwise proved by sufficient evidence. The average daily number of prisoners in the jails was 1,549, ten per cent. of whom died. Prison discipline is scarcely begun, and all prisoners work on the roads, that labour being exceedingly unpopular and expensive in Burmah. The average cost of each prisoner, owing to the high rates of food and labour, is 68 rupees a year.

Revenue. The land revenue has increased from 11,20,374 to 12,59,917 owing to the increase of cultivation.

	1856-57	...	...	...	1857-58
Rice-acres	6,16,186	...	...	...	6,86,640
Garden	46,469	...	...	...	90,818

The export of rice has risen from 1,26,476 tons to 1,86,494.

Education. There is a Government school at Rangoon which has an English Head Master on a salary of Rupees 300 a month, with two Native Assistants at Rs. 50 and Rs. 25 each. The number of pupils to be received is

limited for the present to one hundred, but even that number has not yet been reached. The present number of pupils is 54 of whom 35 learn English. Grants-in-aid are given to Mission schools. The present number of Christian Stations among the Karen tribes is 102, each having a school and school-master. The number of churches is forty-five. The total number of pupils is 2,426. If the population of each of these Christian Stations be estimated at 150 souls, we have a total Christian population of 15,300 men, women, and children among these tribes, who number altogether from 50,000 or 60,000 souls. Dr. Mason however considers that the actual number of Christians falls very little short of 20,000. These tribes are thinly scattered over a wild mountainous country. Seven of these stations are among the independent tribes beyond the practicable British Frontier, upon the Eastern declivity of the water-shed which divides the Sitang and Salween Rivers. There are also Mission schools in Rangoon, Bassein and Tounghoo not aided by Government.

Public Works. All works, except emergent works, have been stopped. The defensive posts at Thyetmyo and Tounghoo are nearly completed, churches have been erected at those stations, and an iron church has been imported for the cantonment at Rangoon. An obelisk 139 feet high has been erected on the Western entrance of the Rangoon River, and roads from the Sea to the Tounghoo Pass, and from Prome to Meaday completed. The works at Dalhousie are carried out.

Marine. The Marine Establishment has been reorganized. The Superintendent of the Irrawaddy Flotilla has been appointed, under the Commissioner, head of all the Marine Establishments in Pegu. All the Marine Officers, namely, those of the Superintendent of the Dallah (Rangoon) Dock-yard, and of the Master Attendants at Rangoon and Dalhousie, as well as that of the Irrawaddy Flotilla itself, are subordinate to him. The execution of all Naval work is under his superintendence, as well as the purchase of timber or any other Marine stores. He is also responsible for the discipline of the officers and men of the Flotilla. The expenditure on the Irrawaddy Flotilla for the year was Rs. 3,54,794 including Rs. 86,309 for timber used in repairs. The amount received for private freight was Rs. 45,216. The Dallah Naval yard cost 1,53,789. The tonnage of the ports was

	Ships.	Tonnage.
Rangoon ...	... 614 ...	2,17,884
Dalhousie ...	... 137 ...	37,403

Finance. The charges of the Civil Establishments are

					Rupees.
Judicial	...	...	...	...	9,22,170
Revenue	...	...	...	...	3,44,637
Customs	...	...	...	...	71,673
Marine	...	...	...	....	6,96,806
General	...	...	...	...	5,78,618
		Total		...	Rs. 26,13,904

The Military Expenditure is 29 lakhs more.

Political. The King of Burmah remained friendly during the year. He has moved his capital from Umerapoora to a place called Mundelay, six miles distant. According to the astrologers the destinies of Umerapoora had been accomplished.

Military. The Pegu L. I. B. has been brought up to its complement 928 men, costing 1,46,252 a year. Of the men 154 are Malays.

Agriculture. Of the 777,458 acres of arable land in this Province, a vast proportion of 686,640 acres are under paddy cultivation. Of the remainder 46,982 acres are occupied by Gardens, and on the rest cotton, oil-seeds, the mulberry, indigo, sugar-cane, &c. &c., are grown. The measured area of land under cotton cultivation in the plains amounted last year to 9,332 acres, and the value of the produce in its uncleaned state was about Rupees 98,502. Besides this, however, a very large quantity is grown in the Hill clearings, concerning the yield and value of which no estimate can be formed. The whole of the cotton grown finds a ready sale in Pegu and Upper Burmah. A good deal is exported to Eastern Bengal through Arracan. 3,540 acres are under mulberry cultivation, 260 acres under sugar-cane, and 521 under indigo. A Soldier's Garden has been established in Rangoon. The experiment of rearing sheep in the upper portion of the Province, commenced in 1855 by Lord Dalhousie's orders, has proved entirely successful. Altogether 58 Rams and 1,028 Ewes were imported at various times between the beginning of 1855 and March 1857, for the Breeding Farm at Thyetmyo, and upon the 1st May 1858 the total number of Sheep and Lambs amounted to 2,879. Since March 1857, no importations have been made for the Farm, which has therefore been dependent upon itself, and the increase since then, has been, after deducting all casualties, at the rate of 38 per cent. per annum. The breed has improved. Merino half-breeds turn out well.

Forests. The forests have been divided into six groups, by Dr. Brandis, the Superintendent, and the trees into four classes, according to girth. Only 1st class trees are to be cut, and of these it is estimated 30,000 trees may be obtained per annum.

During the two past years 30,857 logs were sent. 14,261 logs were sold during the year for Rs. 1,21,054. New plantations have been surveyed.

Survey. 24,700 square miles, or about two-thirds the area of the province, have been surveyed, at a cost of Rs. 2,04,623.

ADMINISTRATION OF TENASSERIM.

1857-58.

Civil Justice. The number of suits instituted was 1,590, of the probable value of Rs. 16,94,728, of appeals 132, and of Miscellaneous cases 132. Of the regular suits 1,569 were disposed of, of the appeals 127 and of the Miscellaneous 49.

Criminal Justice. 6,106 persons were arrested, of whom 3,537 were convicted, and 2,220 acquitted. During the year under review, 56 persons were committed to the sessions court; 20 remained pending trial from the former year; and of these 76, 55 were brought to trial, of whom 46 were convicted, 9 acquitted, and 20 remained pending trial.

Jails. The system which obtains in Singapore of employing the convicts on public works, has been tried during the year. The result is satisfactory. The Superintendent estimates the profits of labour in the jail, during the entire year, at Rupees 93,699, against a total of charges amounting to Rupees 95,319. By far the greater proportion of profits would of course have been realized under the old system, but in the Department of Public Works, the convicts have supplanted free labour, where it would formerly have been paid for to the value of at least Rupees 12,000. By an increase of supervision in the convict department costing Rupees 3,600 a year, a saving in the engineer department has been effected amounting to Rs. 9,910-6-0 annually, and a reduction in the convict police has been carried out amounting to Rupees 4,003-8-0. The mode of keeping accounts has also been much simplified. The average expenditure on each prisoner, buildings excepted, is Rs. 57-8.

Revenue. The revenue of the year is Rs. 13,04,226-13-6 showing an increase of Rs. 28,995-5-8. The trade of Moulmain has been

Years.	Value of Imports.	Value of Exports.
1856-57	50,36,748	53,20,759
1857-58	53,96,877	57,86,209
Increase	3,60,129	4,65,450

Education. A number of private schools have sprung up to teach English at a charge of from 4 to 8 annas. The Baptist Mission School is well attended, through it charges from 1 to 2 Rs. a month. The attendance in the Government School fluctuates.

Finance. The total charges for the year were Rs. 9,46,813, and the revenue therefore shews a margin over civil expenses of Rs. 3,57,413

Political. A Robber chief named Meng Loung, aided by a Shan official, murdered the native officer of the district, and disturbed the Yoonzaleen. His Shan ally was killed in an attack on a party of the 13th M. N. I., a levy raised, and Meng Loung driven into the country of the Eastern Karens.

Miscellaneous. The population is supposed to be 3,14,276 or 6 to the square mile.

ADMINISTRATION OF THE POST OFFICE.

1856-57 AND 1857-58.

DURING these two years the number of Post Offices in India has been increased by 57, making 818. The total distance traversed by the mails by Railway, cart, runners, and boats was 36,933½ miles a day. The average cost per mile is

	Cart hires.	Foot hires.
Bengal	11- 2- 4	1-4-6
Madras	15-12- 0	
Bombay	17-11- 9	11-5-1
N. W. Provinces ..	16-13-10	

The following shews the increase of correspondence

PRESIDENCY.	One month prior to the introduction of the ½ an. postage in 1854-55.	One month in 1854-55.	One month in 1855-56.	One month in 1856-57.	One month in 1857-58.
Bengal	3,83,943	4,90,865	5,68,012	6,28,208	7,01,954
Madras	3,29,547	4,55,556	4,75,622	5,94,087	6,47,810
Bombay	2,92,588	5,25,355	5,91,814	7,25,819	9,67,264
N. W. Provinces ...	5,84,145	9,28,024	10,56,382	11,56,921	12,08,637
Total ...	15,90,223	23,99,800	26,91,830	31,05,035	35,25,665
Estimate for 1 year...	1,90,82,676	2,87,97,600	3,23,01,960	3,72,60,420	4,23,07,980

Unpaid letters have increased from 32 per cent. to 38 per cent. It appears that the number of chargeable covers has progressively increased as follows. In the first year of the reduced postage the increase was 72·17 per cent. In the second year it was 12·22 per cent. In the third year 14·82 per cent., and in the fourth year 13·45 per cent.* Newspapers have increased from 15,16,644 before the reform, to 49,18,680 after it. Official franks have increased 54 per cent., books sent, nearly 100 per cent. and registered letters 38 per cent.

The bullock train during 1856-57 earned 8,67,946, and cost 5,20,288. In the following year it was employed almost exclusively for the service of the State.

In 1857-58 stamps were sold to the value of Rs. 8,53,494. The total collections of the year amounted to

	1853-54.			1855-56.			1856-57.			1857-58.		
On Letters and Newspapers - - - - -	17,37,743	0	5	5,70,818	5	11	7,65,081	7	9	6,90,648	10	5
„ Parcels - - - -	2,55,127	2	6	2,01,925	14	6	2,29,850	9	11	1,34,638	11	0
Sale of Postage Labels	- - -	-	-	8,52,744	8	8	8,70,612	5	6	8,53,494	5	4
Total - - -	19.92,870	2	11	16,25,488	13	1	18,65,544	7	2	16,78,781	10	9

The amount has therefore almost risen to its level before the reductions. Official postage amounted to Rs. 18,53,210. The expenditure of the post office was Rs. 41,67,103. During the year the total number of letters, books, &c. received was

Letters	3,70,35,936
Newspapers	52,72,044
Parcels	5,33,256
Books	1,77,180

Throughout the mutinies the conduct of native post office servants has been generally excellent.

* In the United Kingdom the increase after the introduction of the penny postage was as follows :
In the first year 122½ per cent.
In the second year 16½ per cent.
In the third year 6 per cent.
In the fourth year 5¾ per cent.

THE

ANNALS

OF

INDIAN ADMINISTRATION.

PUBLIC INSTRUCTION IN BENGAL.

1857-58.

On the 18th of October 1858, Mr. Gordon Young, Director of Public Instruction, submits to the Government of Bengal his Annual Report for 1857-58.

The Regulations of the Calcutta University were ratified by the Senate in September 1857, and shortly afterwards confirmed by the Governor General in Council. Since that time, however, they have undergone some modification, chiefly with a view to lowering the standard of the Entrance Examination in History and Geography, and excluding the subjects of Zoology, Vegetable Physiology and Mechanics. Examinations for University Degrees were held in the Faculties of Arts and Law. Two students of the Presidency College obtained the Degree of Bachelor of Arts, and eleven passed the examination for that of Bachelor of Laws which will be conferred so soon as they shall have obtained that of B. A. Of 464 candidates for Entrance this year, only 104 passed; 333 failed, and 27 did not complete their Examination. By a majority of one the Faculty of Arts decided against the expediency of establishing University Professorships. The Government English Colleges, viz. those at Calcutta, Hooghly, Kishnaghur, Dacca and Berhampore, were severally in a satisfactory state, and beyond the fact that two or three had to give up their buildings for the accommodation of troops, which nearly extinguished the Berhampore College, they were not much affected by the disturbances of 1858. The uncertainty in the views of the Supreme Government in regard

to bringing Non-Government seminaries of the higher class under the grant-in-aid system and curtailing or abolishing its own Institutions, had still continued, and caused embarrassment in the operations of the year. The Colleges for special and professional education, being the Medical and Civil Engineering Colleges and the Law Department of the Presidency College, stand on a different footing from these, and are likely to have but little concern with any system of grants-in-aid for many years to come. The attention of Government was directed to the falling off, of late years, in the number of qualified Sub-Assistant Surgeons sent out by the Medical College. Dr. Eatwell showed that the cause was not so much any growing unwillingness to enter the College, as (1st) the difficulty in getting through the long and expensive course of training required and (2nd) increased temptations to the students to leave College for other employments before finishing their course. This latter cause affected all the Colleges of late years, and it must necessarily do so as long as there continues to be a brisk demand for well educated youths for grant-in-aid Schools, and for numerous situations in public and private service. The principal remedies suggested by Dr. Eatwell were, that retiring pensions be granted to Sub-Assistant Surgeons, as to other classes of Uncovenanted Servants; and that Students leaving College before the completion of their course should pay a tuition fee retrospectively, at the rate of Rupees 5 a month, for the whole period during which they may have received gratuitous education. These proposals were approved. The Civil Engineering College is still in its infancy, and there is no reason to suppose it will not eventually succeed. By order of the Supreme Government, gentlemen were appointed to the Law Professorships who held no other offices under Government.

The Report contains a Minute by the Lieutenant Governor of Bengal on the Madrusseh College, acting on the suggestion of the Education Despatch of 1854, that the Oriental Colleges should be placed "upon such a footing as may make them of greater practical utility." "The Madrusseh, or Mahommedan College of Calcutta, was founded by Governor-General Warren Hastings in 1781, in order to give to Mahommedan Students 'a considerable degree of erudition in the Persian and Arabic languages, and in the complicated system of laws founded on the tenets of their religion;' so as to enable them 'to discharge with credit the functions and duties of the Criminal Courts of Judicature and many of the most important branches of the Police, which it had (in 1781) been deemed expedient to continue in the hands of Mahommedan Officers.' For this end a scheme of study was laid down which, *excluding Poetry, History, Geography and General Literature*, professed to teach Theology and Law according

to the Koran, the Commentators, and the Traditionists; and Science according to the Græco-Arabic system of Baghdad and Bokhara. This College was, however, consigned to the uncontrolled management of Mahommedan Professors, and the consequence was that 'the studies of the College became nominal, and its ample resources, (about 30,000 Rúpees per annum,) were dissipated among the superior and subordinate drones of the Establishment.' And this seems to have been, with little variation, the condition of the Institution for nearly forty years after its establishment. In 1820 the College was placed under immediate English superintendence, and after that change the abuses, though not wholly eradicated, were less gross and flagrant than in previous years." But as the English Superintendent could act only as an occasional visitor, Dr. Sprenger was appointed Principal in 1850. "This had been the practical result, so far as any result was obtained, of our seventy years' patronage of the Mahommedan College of Calcutta, during the greater part of which time, *i. e.*, down to 1835, the Students had all received stipends, being in fact hired to learn the Theology of Mahommed and the Physics of Aristotle, which, it was up to that time believed, (and as events have shown on true grounds,) few of them would learn in the College on any other terms." Dr. Sprenger's attempts to introduce some improvements in the method of tuition were resented by pupils and teachers, so that it was determined the system should be thoroughly reformed. The English was separated from the Arabic department so that "those who prosecuted the study of Arabic were to eschew English; and those who studied English were to learn no Arabic. The English Department was to be invigorated and improved and Persian was added to it. The Arabic Department was to be made clear of public prayers and funerals; obsolete Science was no longer to be taught in the Arabic language; but the Students of Arabic were in future to study nothing but Mahommedan Law and general Arabic Literature upon an improved and modernised plan." Since this change there has been a decided improvement in the English or Anglo-Persian department, while the attempt to improve the Arabic has entirely failed of success. The Mahommedans of the old school steadily resist any innovation, and there is only one European on this side of India who knows Arabic sufficiently to superintend the College, and he is liable to leave at any moment. The education of each Student costs the State Rs. 158 monthly, and the very object for which it was established, to please the class, is the opposite of gained. The College produces extensive political evil, and this must be always the case in an exclusive School of Mahommedan learning. "It is then desirable to abolish the Madrassch, and to teach Arabic

in the best possible way by means of a Professor or Professors attached to the University. But, if it be ruled that we must still keep up the Madrussah as long as the people choose to resort to it, I would keep it up for its original purpose of Law teaching, and *for that only*. But except by examinations and the grant of prizes and scholarships for attainments in Law, I would exercise no kind of interference with the teaching, but would, as in old days, leave the Moulavees to teach the science in their own way." This plan would enable us to keep faith with and satisfy the people while the original purpose of the Madrussah would be provided for, " by a well appointed Chair or Chairs in the University, for a skilful, rational and liberal teaching of the whole body of Arabic Literature to all who might heartily and earnestly desire to acquire it ; while it would ensure in the Students such an amount and kind of other useful knowledge as would counterbalance the religious and political objections to Arabic, and ensure its being turned to full and fructifying advantage". We are bound to keep up the Madrussah at the Hooglly College according to native usages, and should not demand fees from the Students according to the intention of the Mahommedan endower.

The Zillah and Collegiate Schools continue to be popular, well attended, and efficiently conducted. They are of great importance, as being the main stay of English elementary Education in Bengal, and the basis upon which the Colleges and the University depend for success. They are very useful also as models upon which the English grant-in-aid Schools, that the people are in many places so eager to establish, are established and regulated. In Behar the prosperity of the Government Schools was, of course, more interfered with than elsewhere, but still less than might have been expected. Mr. Harrison the Inspector there urges that *one-fourth* of the appointments of Deputy Magistrate and Deputy Collector shall be given to persons tolerably conversant with English, and that from the 1st January 1863 the University Entrance Examination shall be a necessary qualification for at least one-half the appointments to Moonsiffships, Darogahships, and Pleaderships in the Judges' Courts. No injustice would be done to any class, and a sufficient inducement would be offered to overthrow all objections to the study of English. The Director would gladly see Government announce that after a certain date, say the 1st of January, 1862, no person shall receive any appointment in the superior grades of the Uncovenanted Service unless he have passed the University ' Entrance Examination.'

Junior Scholarships of 8 and 10 Rs. a month are now awarded to lads coming from non-Government Schools, and both they

and Government Scholars may hold them at any College affiliated to the University whether Government or not. The four Normal Schools (at Calcutta, Hooghly, Dacca and Gowhatee,) have been working satisfactorily and successfully under the immediate supervision of the Inspectors of Schools. The restriction of expenditure in consequence of the Mutinies limited the spread of Vernacular Education.

The Director appends to his report the letter of Lord Ellenborough, as President of the Board of Control, to the Court of Directors on the state of Education in India, with Sir George Clerk's Memorandum upon it, dated 28th April 1858, and answers the statements of both, paragraph by paragraph. He gives the following:—

Abstract of Return of Grant-in-aid Schools in operation at the end of 1857-58.

Grants under Dispatch of 1854.

Missionary Schools,	19	receiving...	Rs. 703	8	0	per mensem.
Native Schools. ...	181	„	...5,106	2	0	„
Calcutta Industrial School,.....	1	„	... 600	0	0	„
Calcutta Girls' School, (chiefly for Europeans,) .	1	„	... 200	0	0	„
	202		6,609	10	0	

Old Grants not made under the Dispatch of 1854.

Jonye Training School (got up and managed entirely by Natives,).....Rs.	100	0	0	per mensem.
Grants to Missionaries for educating Kacharee and Cossiah Hill wild tribes, ...	100	0	0	
Total,...	6,809	10	0	

The Government of India sanctioned a grant of Rupees 1000 a month to the Church Missionary Society in aid of the establishment of Schools among the Southals, on the ground that it was to be 'regarded as a grant-in-aid to a Missionary body for the

secular instruction of an uncivilized tribe, and that as such it was entirely in accordance with the views expressed in the Court's Dispatch of 19th July, 1854, and differing in degree only, not in kind, from the grants made to individual Missionaries for like purposes, with the Court's full approbation and sanction.' It was disallowed by the Court of Directors in a Despatch of 22d July 1857. They say;—"The Sonthals, though equally debased in ignorance, and devoid of rational religion with the races referred to in our Dispatch of 1854, differ from them in one important particular. They do not occupy separate regions or tracts of country, so as to form isolated communities, locally separated, as well as socially distinct, from the Hindoo and Mussulman population. They are, on the contrary, employed freely by zemindars and speculators in land of all classes, for jungle clearance and for other agricultural purposes, and are thus often located in close vicinity with well inhabited towns and villages, and mix with the general population in many of the relations and concerns of life. We do not feel, therefore, that in dealing with the Sonthals we are exempted from the necessity of maintaining that cautious line of proceeding which we ought always to deem so essential in the establishments founded or supported by Government for the education of the people of India. Thus, although we by no means object to the amount of the expenditure you have proposed to sanction for the purpose of civilizing and instructing the Sonthals, we cannot approve that part of the scheme which identifies the Government in measures prosecuted by the Missionaries, and so exposes the arrangement to the risk of perverted misconstruction." The Commissioner of the Sonthal Pergunnahs and the Director of Public Instruction made a strong representation on the subject to Government.

In a despatch (dated 22nd June 1858,) the Court of Directors wrote. "We desire that you will bear in mind the great financial difficulties to which we are now exposed, and that you will not on any account sanction any increase of expenditure in any part of India in connection with Education, without our authority previously obtained." For a time this will prove a serious obstacle to Education, as the order applies to the unallotted portion, if any, of the sum already sanctioned by the Government of India for the support of Schools by means of grants-in-aid in the Lower Provinces. The Supreme Government declined to relax the strict rules for grants-in-aid so as to meet the case of Vernacular Schools and Female Schools. The Principals and Professors of Colleges and the Head Masters of the various Schools, almost without exception, performed their duties most satisfactorily, and in such a way as to render it a real pleasure to co-operate with them. Several of the officers of the

Education Department had passed in the Vernaculars and obtained certificates of proficiency and money rewards.

An addendum to the Report follows containing a Minute by the Lieutenant Governor of Bengal on Lord Ellenborough's Letter of 28th April 1858, and on Sir G. Clerk's Memorandum. He shews that so far as their statements and inferences apply to Bengal they require "considerable correction." On the question of the connection between Education and the Rebellion, the Minute says. "Our wisdom, no less than our duty, is to persevere in what we have begun, and not to turn our backs upon Behar, or any other parts of our territory, because there is difficulty or danger in the path of improvement. It is certain, however, that both the difficulty and the danger are exaggerated, and look imposing only to those who keep at a distance from them and view them through the delusive mist of prejudice and misinformation. As to difficulty—the progress of Bengal, even within the memory of living witnesses, is a proof of the aptitude of the people, and of their plastic docility. And though it is not uncommon in these days to attribute the recent mutinies to our educational operations, and even to propose to draw back from them for fear of similar consequences in future, the error of this opinion is like that of a man who, after unwisely and incautiously exposing a barrel of gunpowder to all kinds of dangerous influences, and having by good luck, and in spite of bad management, long escaped without an accident, should at last, when the fatal and inevitable explosion takes place, blame neither the gunpowder, nor his own rashness and indiscretion, but rather lay the whole mischief to account of some one of many little sparks flying about, and talk of limiting the use of fire and candle in future to prevent similar occurrences.

The people of Behar doubted and disliked our plans of education, as all ignorant people doubt and dislike schemes for their improvement. But if the army had not mutinied the people would never have thought of rebelling in consequence of our Schools, nor have they now thought of it. For the few of the people of Behar who have joined the rebellious Troops, have done so, some because they were bound with those Troops in the closest ties of relationship, and others because they were thieves and plunderers by taste and profession, and ready to take advantage of any moment of confusion And, except in rare cases, no especial hostility has been shown towards educational buildings or persons, so that the work of the Schoolmaster has gone on little if at all affected by the surrounding disturbances. The army mutinied because it was a mercenary army, ill-organized, mis-governed, spoilt, encouraged into the grossest exaggeration of its own supposed power and importance, unwatched,

unguarded, unsuspected, and, in its material, ignorant, uneducated and superstitious beyond all other classes of our subjects. Of all men in India the Sepoys had known the least and felt the least of our zeal for education; which, whatever it had incited us to do elsewhere, had never led us to think of educating the Soldier, or of raising him from his debased and semi-savage intellectual condition. It was an army always more or less mutinous, always on the verge of revolt, and certain to have mutinied at one time or another as soon as provocation might combine with opportunity. It is vain to talk of this great, but always impending, always inevitable mutiny as if it had been caused by a few Schools in Hindoostan. The mutiny had many causes, of which Schools were the most trifling and the most inconsiderable; and it would have taken place, sooner or later, though there had never been a child taught to cypher from one end of India to the other."

In the district of East Bengal there are only 9,150 boys at the Government Schools out of a population of 6,800,676. According to Horace Mann's deductions from the Educational Census of Great Britain 850,084 boys should be at School. In addition to this number, there are in the 147 indigenous Schools under improvement, 5,988 boys, and 162 girls, taught by the Gurus of the Schools and by 55 Pundits paid by Government. Many of these Schools are quite equal to the aided Schools, but some are inferior. The number of boys in the regular Schools increased from 3,862 on the 30th April 1856, to 9,150 on the 30th April 1858, that is, 235 per cent. The rate of increase, considering the constant discouragement under which the department has laboured, gives hope for a vast development in future, but the proportion to the mass of the people is still utterly insignificant. The following is a Synopsis of the results of the two first University Entrance Examinations:—

INSTITUTIONS.	First Class.			Second Class.		
	1857.	1858.	Total.	1857.	1858.	Total.
Presidency and Dacca Colleges,...	58	18	76	20	26	46
Other Government Institutions,...	23	8	31	14	33	47
Grant-in-aid Schools, ...	1	...	1	3	1	4
Missionary Institutions, ...	12	...	12	5	13	18
Hindu Institutions, ...	1	1	2	...	3	3
English Institutions, ...	15	...	15	2	3	5
Miscellaneous, ...	5	2	7	3	3	6
Total, ...	115	29	144	47	82	129

In North East Bengal and Assam, covering an area of 67,507 square miles and with a population of 6,956,300, assuming that about 7 per cent. of the population consists of *boys* of the School-going age, there should be at least 4,86,000 boys under instruction; but the Statistics, as far as they go, shew about

1,213 boys attending English Schools,
739 ditto ditto Anglo-Vernacular Schools,
11,268 ditto ditto Vernacular Schools,

Total ...13,220 boys. That is to say, very little short of 3 per cent. of the boys capable of receiving education as yet avail themselves of the benefits of School instruction; and in proportion to the entire population only 1 in 500 attend School. The Calcutta Normal School continues to flourish. On the 30th April, 1858, there were 94 pupils on the rolls. Fifty-four qualified themselves during the session for employment, of whom 36 were appointed as Teachers in the Schools.

Presidency College.—The number of Students in the College on the 30th April, 1858, was as follows :—

GENERAL DEPARTMENT.

First year, ...	94	
Second year, ...	41	
Third year, ...	26	
Fourth year, ...	4	
		165

LAW DEPARTMENT.

First year, ...	9	
Second year, ...	20	
Third year, ...	19	
		48
Total No. of Boys,		213

Besides these, 37 Out-Students attended the Lectures, of whom 26 were in the Law Department. The cost of educating each pupil in the General Department was Rupees 39-13-8 per mensem and in the Law Department Rupees 24-10-5 a month, while the expenses in those departments for the previous session were respectively Rupees 46-15-4 and 23-7-2 per mensem.

The Library generally is in very excellent condition, and is made much use of both by students and teachers. It contains 7315 volumes.

STATISTICAL RETURN of Government Colleges in the Lower Provinces for the year 1857-58.

1	3	4	5	6	7	8	9	9 A.	9 B.	9 C.	9 D.	10	24			25		
Name of Institution.	When established.	Number of Pupils on the Rolls at the end of the Year.				Average daily attendance during the year exclusive of authorized Holidays.	Number of Pupils on the Rolls studying each Language at the close of the Year.					Monthly rate or rates of Schooling Fees.	Monthly Cost of educating each Pupil.					
		Hindus.	Mahommedans.	Others.	Total.		English.	Bengali.	Arabic.	Sanscrit.	Persian.		Total cost.			Cost to Government.		
Dacca College, ...	1841	39	1	1	41	39	41	39	0	0	0	2 Rs. 8 As.	29	6	7	27	1	11
Hooghly College, English Department, ...	1836	37	0	0	37	36	37	37	0	0	0	3 Rs.	28	9	8	0	0	0
„ Arabic Department, ...	1836	2	42	0	44	42	0	0	42	0	0	8 As.	22	4	7	0	0	0
Calcutta Madrusseh, Arabic Department, ...	1781	0	69	0	69	68	0	0	69	0	0	8 As.	18	14	10	18	9	6
Berhampore College, ...	1853	25	0	0	25	12	25	25	0	0	0	2 Rs.	98	6	7	96	12	0
Kishnaghur College, ...	1846	21	0	0	21	23	21	21	0	0	0	3 Rs.	44	1	4	40	15	5
Sanscrit College, ...	1824	337	0	0	337	269	161	176	0	337	0	1 Re.	7	14	9	7	6	0
Presidency College, General Department, ...	1855	172	3	1	176	155	176	139	0	0	0	5 Rs.	39	13	8	36	0	6
Patna High School, ...	1835	39	9	3	51	51	51	0	0	0	32	1 Re. & 8 As.	15	15	11	15	1	7

In calculating the charges two-thirds of the Principal's pay have been reckoned as an expence of the College, the other third being divided between the College and the Collegiate School (which is also under the Principal's general charge) in proportion to the number of pupils in each. The charges for servants and contingencies have been divided between the College and the Collegiate School, in proportion to the number of pupils in each.

Medical College.—The following is a list of the pupils of the English class at the close of the Session.

Stipendiary Students at 8 Rupees each per month,	7
Scholarship holders at 12 Rupees each per month,	28
Free Students, ...	71
Ceylon Students, ...	3
Total	109

Of the Natives one is Mahommedan and the remainder Hindus —of the latter there are :

Brahmin, ...	32
Koysto, ...	30
Boydo, ...	9
Sutgope, ...	2
Weaver, ...	1
Banker, ...	3
Kurmokar, ...	1
Teelee, ...	1

In the Military or Hindustanee class there are 55 pupils upon the full pay of five Rupees, and 10 Stipendiary pupils from Assam making in all 65. Of these, 51 are Mahommedans and 14 are Hindus. Of the Hindu Students, there are

Brahmin, ...	2
Koysto, ...	4
Koormee, ...	5
Chuttree, ...	3
Total	14

Fifty-eight pupils are natives of the North Western Provinces and Assam, and seven of Bengal.

In the Bengali class there are 48 stipendiary pupils upon the full pay of five Rupees, and 43 free, making in all 91. Of these, 87 are Hindus and 4 Christians. Of the Hindu Students there are

Brahmins, ...	34
Boydos, ...	17
Koystos, ...	17
Sutgope, ...	2
Saha, ...	1
Kurmokar, ...	1
Rajpoot, ...	3
Banker, ...	1
Weaver, ...	11
Total,	87

The Professors complain of the deficiency of the students of the first two years' classes in English. Of 7 students who presented themselves for the College Diploma 4 passed, 2 were remanded for 6 months, and 1 was rejected. The Reports of the Professors on the conduct and qualifications of the students of their respective classes, are satisfactory.

Civil Engineering College.—At the close of the previous year, there remained in the College 31 students; of these 3 seceded during the year, reducing the number to 28 whose average age was $19\frac{13}{14}$ years. Besides these, 11 out-students, some in all subjects, others in a portion only, joined during the year; of whom 10 remained on the 30th April, 1858. The average daily attendance throughout the year was 21.4 out of 28, or 76 per cent. During the cold weather, the greater part of the students proceeded to Raneegunge for the purpose of making a Topographical Survey of ground in the vicinity of that station. They were there from the middle of December till the end of January, and much good it did them in every way. The library consists of 1259 works in 1621 volumes. When examined by one unconnected with the College in Arithmetic, Algebra, Geometry, Plane Trigonometry, Mensuration, Analytical Trigonometry and Conic Sections and Mechanics, 13 per cent. of the Students obtained over $\frac{1}{2}$ marks, 48 over $\frac{1}{3}$, and 74 over $\frac{1}{4}$; while the highest mark is 37 and the average 34 per cent. This is not so satisfactory as last year, but the fact of the Examiner being unconnected with the Institution has something to say to this. Reviewing the final results of the Examinations in all subjects collectively, it appears that 10 per cent. obtained more than half marks, 48 over one-third, and 86 over one-fourth. The highest mark is 61 per cent, the lowest 10, and the average 34. Twenty-one Students out of 28 were fully examined.

School of Industrial Art.—There were on the 30th of April, 1858 in this School 51 Students, and since its foundation there have been up to that date 504 names on the rolls. Total number of Students of each race admitted from August 1854 to April 1858;—

Europeans,	2
East Indians,	137
Bengallee (Hindoos),	356
Bengallee (Mahomedan),	7
Hindustanees,	2
	504

Eleven of the first year's (1854) students are still in the School. The Inspector reports;—"the School has undoubtedly

achieved a certain success, but whether proportionate or not, may be a question. He recommends Government "to undertake the entire management of the School, connecting it perhaps in some way with the C. E. College and looking to it to ultimately become a Normal School for Native Drawing Masters" :—

ABSTRACT of Attendance at the Colleges and Schools in 1857-58.

		Number attending Colleges.	Number attending Superior Schools.	Number attending Inferior Schools.	Total.
General Education	Government	695	5,255	7,534	13,484
	Private*	No Returns	1,836	12,235	14,071
Special Education	Government	307	263	None.	570
	Private	No Returns	36	No Returns	36
Total		1,002	7,390	19,769	28,161

* Private Institutions not receiving aid object to send Returns, and are consequently omitted in these Statements.

ABSTRACT of Grants-in-Aid received by Private Institutions during the year 1857-58.

	Colleges.	Superior Schools.	Inferior Schools.	Total.
General Education ...	None.	15,421 0 0	40,896 4 7	56,317 4 7
Special Education ...	None.	7,200 0 0	None.	7,200 0 0
Total ...	.....	22,621 0 0	40,896 4 7	63,517 4 7

The *Receipts* of the Education Department were

		Rs.
Proceeds of Endowments,	... ...	13,024
Private donations, ...	... ...	1,293
Tuition Fees, Fines, &c.,	... ...	1,45,174
Other Sources, ...	... ...	17,303
	Total, ...	1,76,795

The *Charges* of the Educational Department were

Salary and Establishment, ...	...	8,38,217
Books, Prizes and other rewards,	...	18,738
Miscellaneous and Contingent charges, ...		1,89,092
		10,46,047
Deduct *Receipts*, ...	... ...	1,76,795
	Rs.	8,69,252

GENERAL STATEMENT of Amount expended by Government on Education during the Year 1857-58, (compiled from the Accountant's yearly Statement.)

	Salaries.	Books, Prizes and other rewards.	Pensions.	Contingencies.	Grants-in-aid.	Total.
General Establishment	1,57,078-11-5	0	0	19,753-0-5	0	1,76,831-11-10
Government Colleges and Schools						
General	5,25,002-12-8	16,901-0-3	1,235-4-0	41,431-9-10	64,520-6-10	6,49,091-1-7
Special	1,37,732-11-2	1,162-0-0	0	22,895-7-4	7,200-0-0	1,68,990-2-6
Scholarships for General and Special purposes	0	0	0	0	0	36,558-11-9
Private Colleges and Schools						
General	2,144-6-5	675-0-0	0	2,800-0-0	0	5,619-6-5
Special	0	0	0	0	0	0
Scholarships for General and Special purposes	0	0	0	0	0	1,300-0-0
Total	8,21,958-9-8	18,738-0-3	1,235-4-0	86,880-1-7	71,720-6-10	10,38,391-2-1

The Appendix further contains detailed Reports of the various Schools and Colleges, Circulars and Notifications issued on Educational subjects during the year, Reports of Examinations, the Educational Despatch of the Court of Directors in 1854, Letters from the Rev. Dr. Duff and Mr. George Smith, Principal of the Calcutta Doveton College on Grants-in-aid to Superior Schools, a Memorandum by Captain Lees on the Calcutta Madrusseh, Correspondence regarding Sonthal Education, the Speech of the Lieutenant Governor at the Distribution of Prizes at the Medical College, and Miscellaneous Tabular Statements.

ADMINISTRATION

OF THE PUNJAB AND ITS DEPENDENCIES.

1858-59.

Civil Justice.—The reduction of the time within which claims for the recovery of debts might be made, from 12 to 6 years, caused a decrease of 20,607 in the number of original suits instituted, compared with the preceding year. The value of the claims preferred also diminished by nine lakhs of rupees. Out of 66,279 cases on the files of the different courts, only 1,648 remained undecided. Those statistics, which are held to indicate the wakeful scrutiny of the judges, are satisfactory: a proportion, equal to 17 per cent. of the contested suits, was given in favor of the defendants; the number of compromises was moderate; and the awards in cases referred to arbitrators were sufficiently checked and modified. The average duration of suits was 26 days; about two-fifths of all the suits were disposed of in the Tehsheeldars' or Small Cause Courts.

Towards the end of the year, modifications affecting the *law* and *procedure* prescribed by the Punjab Civil Code came into operation. While claims to real property may be heard any time within 12 years, 6 years is the limit for suits founded on bonds, 3 years for suits founded on bankers' books and marriage cases, and 3 months for petty cases. No bond for a sum above Rs. 50 can be admitted in evidence unless registered. Bankers are required to keep a day-book as well as ledger. Sales of inherited lands in satisfaction of decrees cannot take place without the sanction of the Judicial Commissioner, and rules have been laid down regarding breaches of marriage and betrothal contracts. Such are the changes of the *law*. Those affecting

procedure relate to the subject of costs, the language of record, and processes after decision. With regard to *costs*, a revised scale of institution stamps has been adopted, calculated at 2½ per cent. on the value of the claim preferred; and the fees payable for summonses have been fixed at the same rate. In suits below Rs. 100 and above 1000 in value, officers are obliged to take the depositions of witnesses, and to write their decisions in English, and in their own hand-writing. This is an experiment with the view of excluding the Moonshees from all share in the proceedings. With regard to *processes after decision*, two modifications have been made. By the first, decisions of the lower courts, already affirmed by the Commissioners, cannot be appealed to the court of the Judicial Commissioner, though that Officer retains the power of reviewing any particular case on his own motion. By the second, the rights of decree-holders to the sale proceeds of the property of debtors, sold by order of court, are regulated.

Criminal Justice. 40,088 crimes were registered to 38,401 in 1857. But going back to 1856, we find that, compared with that year, a year undisturbed by extraordinary events, there was a decrease of 316 cases. Crime was, therefore, less prevalent than in ordinary years. There was a slight increase in crimes of the 1st and 2nd degrees of atrocity, taken together; though these were still below the average of 1854 and 1855. The excess is attributable to the greater frequency of crimes against life and property on the frontier, particularly in the Peshawur district, where, especially in 1857, they were unusually few. In crimes of the 3rd magnitude there was a satisfactory diminution. In 1856, these numbered 18,220; in 1857, 17,876; in 1858, they decreased to 16,004. Highway-robberies were less by 55 than in 1857; and burglaries, thefts and cattle-stealing were also less frequent. Cases of adultery were more numerous; the leniency of our laws probably encourages it. In all, 56,241 persons were brought to trial; of these, about one-third were acquitted; 1,628 were committed to the sessions; and the remainder convicted by the District Courts. The average duration of cases in which the Police were employed was 9 days; and in those where they were not, 6 days. Nearly one-third of the property stolen was recovered. The aggregate of crime reported, in proportion to population, was as 1 to 323. The operation of the Mutiny Acts of 1857 was suspended.

Certain reforms in the penal law of the Punjab were put in practice. They relate chiefly to legalising the more frequent infliction of fines and corporal punishment; to the combination of these penalties with imprisonment; and to the limitation of the *term* of imprisonment.

Police.—The population of the Cis and Trans-Sutlej States

(which had been excluded from the general disarmament, which took place on the annexation of the Punjab,) with the exception of the hill districts of Simla and Kangra, were thoroughly disarmed. The total number of weapons collected was 1,09,669. But the population of the independent Sikh States are not directly affected by this measure. The weakest point of the Police system is the impunity with which simple burglaries and thefts are committed. Except in the Cis-Sutlej States where, as in Europe, the dissolute and improvident are the criminal class, these crimes are generally committed by such tribes as the Harnee, Sansee, and Bowriah. Experiments are being made to locate them on waste lands under police control. On the 31st of August, two disarmed Regiments of Native Infantry at Mooltan, the 62d and the 69th, and a troop of Native Horse Artillery, took alarm at the order of Government, according to which they would be sent to Hindoostan in parties of 20 and 30, and broke out into open mutiny. They fled. Captain Norgate's detachment and the Police captured several and destroyed the remainder. Of 1,323 sepoys who mutinied, 580 perished by the sword or by drowning; 719 were captured; of 24 only was the end doubtful. The Police of the Kangra district arrested upwards of 80 fugitive sepoys who had penetrated from the territory of the Maharajah of Cashmere to the borders of Chinese Tartary. The existing strength of the regular Punjab Police, and its expense were

Strength of all ranks, ...		11,183 men.
Monthly cost, ...	Rs.	77,226.
Strength on 1st January, 1858, ...		11,028 men.
Monthly cost on ditto, ...	Rs.	76,692.

Jails.—There was a marked decrease in the number of prisoners, omitting the 7 Jails of the Delhi and Hissar divisions recently added to the Punjab. The total was 10,099, compared with 12,469 in 1857. There has been a progressive reduction since 1854, and the number was at the end of the year only 99 in excess of that for which the existing accommodation suffices. The average cost of each prisoner was reduced to Rs. 30-14-3, owing to the cheapness of food. The aggregate expense of all the prisons, old and new, was 4,39,362 rupees, or £43,936, and the average cost Rs. 32-2-11 per head. For all the jails, the rate of mortality is unusually low, being 4.83 per cent.; and this low rate would be further reduced if the prisons in the Delhi territory were omitted, the average in the rest of the Punjab being 3·28, whereas it was in 1856 10·10, and in 1857, 6·67. The healthiest prisons are at Bunnoo, Shahpoor, Sealkote and Kohat. Convict education has received an impulse; the number of prisoners, 2,005, reported at the beginning of the year as being able

to read and write, was doubled at the end, and one-third of all the prisoners were under instruction; but the Inspector is not satisfied with this proportion. Jail manufactures prospered, particularly at Umritsur. A total profit of nearly half a lakh of rupees on this account accrued to Government. Only 25 prisoners, out of a daily average of 13,652, escaped, and of those, 14 only remained at large at the end of the year.

Land Tax.—The following figures shew the position of the land revenue for 1858-59:—

Demand.	Collected.	Balance uncollected.	Nominal.	Real.
1,51,70,236	1,47,43,388	4,26,848	2,22,223	1,22,042

The real balance does not nearly amount to one per cent. on the total demand. Compared with the preceding year, there was an increase in the demand of rupees 28,462. This, however, is exclusive of the land revenue of the Delhi territory, which amounts to about 40½ lakhs. About 1½ lakhs were remitted. The revenue was collected with ease. The seasons were propitious, but the low citation of prices fell heavily on the agricultural population. The revised settlements of the Goojerat and Googaira districts were completed. Those of Mooltan, Shahpoor, Jhelum and Rawul Pindee were considerably advanced. The expense of these operations is a little above one lakh of rupees. Gradually, that minute and elaborated Doomsday-book, in which are recorded, on a uniform plan, from generation to generation, every hereditary, every acquired, right of peasant proprietors, counted by millions, approaches a termination. Much attention is given to its annual correction,—to the instruction of the Putwarees in whose custody it is kept,—and to the abbreviation of the forms and statements, in which something of its essence and utility is apt to be lost. In spite of low prices, and the number of Punjabees enlisted, there was a large increase of cultivation, and many new wells were sunk. The agricultural population on the whole were never more prosperous and contented than at present. It is calculated that there are some 60,000 Punjabees in our employ, and that their pay amounts to 72 lakhs, or about half the land-tax. Much of their earnings finds its way back to the homestead of the soldier, so lately a revenue-paying yeoman, and goes a long way towards defraying the liabilities of his village. In addition, a large share of the booty from Delhi and Lucknow fell to the Punjabee troops, never backward in its acquisition.

Customs, Excise and Opium.—The collections rose, from rupees 4,30,502 to rupees 4,64,244, being an increase of rupees 33,742.

Salt.—In the revenue derived from the Cis Indus and Kohat mines there was an increase of Rs. 1,32,211. The whole amounted to the unusual sum of Rs. 21,22,190.

Stamps and Miscellaneous.—The Stamps and Post Office receipts exhibit a slight increase, but the canal water rent, grazing dues, fines, &c. a slight decline. Compared with the returns for 1857-58, the sum total of the general revenue varied but little :—

Year.		Land Tax.	Spirits, Drugs, Opium.	Salt.	Stamps and Miscellaneous.	Total.
1857-58, ...	Rs.	1,47,49,089	4,30,502	19,89,979	20,87,306	1,92,56,876
	£	1,474,908	43,050	198,997	208,730	1,925,687
1858-59, ...	Rs.	1,47,43,387	4,64,224	21,22,190	19,14,245	1,92,44,046
	£	1,474,338	46,422	212,219	191,424	1,924,404
Difference,	Rs.	— 5,702	— 33,722	—1,32,211	— 173,061	—12,830
	£	— 570	— 3,372	— 13,221	— 17,306	— 1,283

The Delhi revenues amount to Rs. 74,48,277, so that the annual revenue of the Punjab and its dependencies exceeds 2½ millions sterling.

Education.—Much must depend on the Normal schools at Lahore and Rawul Pindee, and the one more recently established at Delhi. The principal Zillah or county schools are at Umritsur, Ferozepoor, Simla, and Goojerat. In addition, a school at Delhi, formerly known as the Delhi College, and maintained by a bequest made by the late Nawab Fuzl Ali, was established. The course of study at these superior schools may be pursued through the medium of the English or the Vernacular languages, at the option of the pupils. It comprises History, Geography and Mathematics, together with the rudiments of Science and Natural Philosophy ; and is similar to that required from candidates for entrance into the Calcutta University. Inferior to these are three classes of schools, in which the medium of instruction is the Vernacular only. These are the Government Tehseel schools, the village schools, maintained by the cess of one

per cent. on the land revenue, and the indigenous schools, which are independent of Government control, unless supported by grants-in-aid. In the last mentioned class, the plan of study is purely native, and the instruction generally rude and vicious. But the machinery of the Educational Department is systematically employed in the creation and improvement of the "Tehseel" and "one per cent." village schools. As regards the Punjab provinces, exclusive of the Delhi territory, (where the organization is still incomplete) the following figures exhibit the progress made during the past year :—

	1857-58.		1858-59.	
	Schools.	Pupils.	Schools	Pupils.
Government Tehseel Schools,	110	6,953	116	8,812
One per cent. Village Schools,	1,336	12,024	1,844	24,072
Indigenous Schools, ...	3,461	26,317	6,173	32,023
Total, ...	4,923	47,008	8,193	64.907

In the Delhi territory, the number of pupils in the schools under Government control is reported to be about 3,500. The attendance at the one per cent. schools has been doubled, but until lately many have been confined to mosques, and have been mere seminaries for the propagation of Islamism. Many of the teachers are ill paid and incompetent. The expenditure for 1858-59, is as follows :—

Expended by Government, ...	Rs. 1,69,100
Expended from the one per cent. fund,	Rs. 1,16,691
	Rs. 2,85,791

Of the Government expenditure, rupees 8,054 went in grants-in-aid of Mission schools, which are usually in a very efficient state. Books to the number of nearly 40,000, realizing some

6,100 Rs. were sold. The report pays a high tribute to the ability of the late W. D. Arnold, the Director of Public Instruction.

Public Works.—The condition of the finances restricted expenditure except on the Baree Doab Canal. It was necessary also to provide shelter for the large force of European soldiers.

Roads.—Temporary wooden bridges were thrown over all the minor streams. The Grand Trunk Road between Delhi and Umballa was not perfectly completed. When the old line of road between the Sutlej and the Beas has been reconstructed as sanctioned, there will be one continuous metalled road from Delhi to Lahore. The Supreme Government could not sanction a project submitted by Major Robertson for driving a tunnel under the Indus. Some permanent means of crossing the Indus is the first military necessity of the Punjab. The total expenditure was Rs. 6,95,906.

Railroads.—On the 8th of February, 1859, the ceremony of turning the first sod of the railway from Umritsur to Mooltan was performed by Sir John Lawrence. The earthwork from Lahore to Umritsur was completed, and the rolling stock and machinery indented for. The railway follows the central ridge of the Doab, which the canal will soon fertilize and cover with populous villages. The whole line, it is hoped, will be in working order in 4 years. The total expenditure was Rs. 3,39,465.

Canals.—The Baree Doab Canal was opened on the 11th April, 1859, seven and a half years after the first sod was turned. The total length of the canal and its branches, as projected, from the head to the point about 56 miles above Mooltan, where it rejoins the Ravee, is 466 miles; and the total estimate of expense amounts to rupees 1,35,85,502. It is anticipated that, by the end of the present year, the canal will be opened to Lahore; and including the Lahore and Kussoor branches, with escapes and lock channels, hill torrent and other cuts, a distance of 200 miles will be included in the immediate operations. Several hundred miles of roads and fences were constructed in connexion with it, and trees planted to the number of a quarter of a million.

Military and Miscellaneous.—Out of a total expenditure of Rs. 16,65,097, nearly 13 lakhs were devoted to the accommodation of troops. Barracks were commenced at Rawul Pindee, Dera Ismail Khan, Mooltan, Ferozepore and Lahore, though at the two last named stations little has yet been done. The temporary barracks at Attock and Campbellpoor have been completed, those at Umritsur are nearly finished. At Mooltan six temporary iron barracks are now occupied by troops, and five

additional ones are in course of construction. At Lahore also, iron barracks of a more permanent sort, having the improvement of a central dining hall, are in course of erection, for a wing of European cavalry and one of infantry. At Kussowlie two double storied barracks, which had stood for two years only, were destroyed by fire. At Delhi, the palace, and certain native buildings in which the troops are quartered, were adapted, as far as possible, for their convenience; but no general plan for the permanent military occupation of the city has yet been designed. The sum spent in fortifications is not large. The fort at Attock, which commands the road as it crosses the Indus, a little below its confluence with the Cabul river, was improved, and a powder magazine added. The following table exhibits the total expenditure of all kinds on public works for the year 1858-59:—

Works.		1858-59.	Previous Expenditure.	Total.
1st.—Roads, ...	5,51,619	6,95,906	1,18,26,008	1,30,73,533
2nd.—Canals, ...	12,70,000	11,21,375	88,71,413	1,12,62,788
3rd.—Miscellaneous, ...	71,471	3,66,805	28,29,329	32,67,605
4th.—Military,	11,40,976	12,98,292	1,34,96,261	1,59,35,529
Total, Rs.	30,34,066	34,82,378	3,70,23,011	4,35,39,455
Total, £	303,406	348,237	3,702,301	4,353,945

These figures include the Delhi territory. In addition, numerous works of public utility were constructed by private individuals to the amount of a lakh and a half of rupees.

Post Office.—Comparative statement of letters despatched through the district posts :—

Year.	Total number of covers delivered.	Total number of covers returned undelivered.	Grand Total number of letters sent to District Post-Offices.
1857-58, ...	2,52,332	14,090	2,66,422
1858-59, ...	4,28,294	58,640	4,86,934
Increase, ...	1,75,962	44,550	2,20,512

The large increase of correspondence is owing to the restoration of Political quietude.

Electric Telegraph.—The communication was completed to Mooltan, and thence without a break to Kurrachee. Branch lines were laid from Rawul Pindee to Murree and from Umballa to Simla. The total expenditure was Rs. 16,978.

Marine.—The gradual increase of traffic on the Indus is shewn. In 1855 it was 952 tons :—

Year.	Boats.	Maunds.	Tons.
1857-58,	3,548	11,79,495	42,125
1858-59,	3,965	13,96,397	49,871
Increase,	417	2,16,902	7,746

Finance.—The figures subjoined exhibit the financial results of the past year, as compared with its predecessor :—

		1857-58.	1858-59.
Income, ...	Rs.	2,05,30,710	2,81,84,679
	£	2,053,071	2,818,467
Expenditure,..	Rs.	1,78,78,177	1,95,53,182
	£	1,787,817	1,955,318
Surplus, ...	Rs.	26,52,533	86,31,497
	£	265,253	863,149

From the expenditure, the cost of the regular army and of the construction of cantonments has, as is usual, been excluded, but all other expenses are comprised in the above statement. In it also are included the increase of income and expenditure consequent on the annexation of the Delhi territory to the Punjab provinces. Seven lakhs of the Punjab six per cent. loan have yet to be redeemed. The larger operations of the finance of 1858-59 are approximately stated in the following sums :—

ASSETS.

Cash balance on 1st May, 1858, ...	90,71,000
Local receipts, ...	2,81,84,679
Supply bills, ...	1,20,93,011
Other bills (supposed), ...	45,00,000
Remittances from Bombay, ...	20,00,000
Ditto from North-Western Provinces, ...	9,50,000
Total, ...	5,67,98,690

DISBURSEMENTS.

Local, including troops under Punjab Government,	1,95,53,182
Repayments of Punjab 6 per cent. loan, ...	30,00,000
Estimated net disbursements on account of Government, India, Bengal, North-Western Provinces, Bombay, and Madras, ...	25,00,000
Old coin sent to Bombay Mint, ...	3,48,000
Railway, ...	3,37,788
Cost of troops under Commander-in-Chief and Commissariat (supposed)	2,35,09,720
Cash balance on 30th April, 1859, ...	70,50,000
Total, ...	5,62,98,690

The cash balance on 30th May 1859 was 70½ lakhs. Though a remittance of 20 lakhs is on its way from Bombay, 60 lakhs in addition will be needed to prevent the occurrence of a deficit at various treasuries before April 1860.

Ecclesiastical.—More chaplains are urgently needed. No new churches were built. A grant-in-aid of private subscriptions for the erection of a small church at Abbotabad was made.

Political.—Major Lumsden returned from his mission to Kandahar in the summer of 1858. The death of Hyder Khan, the heir apparent, has placed Shere Ali Khan, Governor of Kandahar, next in succession to the Dost. The value which the Ameer sets on our alliance was manifested by his decisive discouragement of a visit proffered by Monsieur Khanikhoff, a Russian agent who had arrived at Herat. Our own policy has been intimated by the Governor-General declaring the Koorum river the boundary of British dominion. The Narnoul division of the Jhujjur territory valued at £20,000 per annum, jurisdiction over the small State of Bhudour, and a remission of the annual commutation tax of Rs. 5,625, were granted to the Rajah of Puttiala. The Rajah of Jheend received the hereditary title to the Dadree territory (£10,300 per annum) and 13 villages in the Koolaran pergunnah with a rental of £1,381 per annum. On the Rajah of Nabha a portion of the Jhujjur territory, valued at £10,600 per annum, was bestowed in perpetuity. In return, the chiefs are bound to render civil and military service when required by Government. The Aloowalia Rajah was rewarded with a considerable Estate in Oude, where he assisted us. The Moharajah of Cashmere is about to be presented with £10,000 in jewels and horses for the force of 2,567 men he sent to Delhi. Before leaving India Sir John Lawrence reconciled him with his cousin Rajah Jowahir Singh. On condition of

his residing at Umballa or anywhere east of it, he is to receive from the Moharajah a lakh of Rupees a year, one-half to be inherited by his male offspring.

The valley of Cashmere was opened to travellers. The independent hill state of Hindoor or Nalagurh (Rs. 64,570 annual revenue) near Simla, lapsed to the British Government owing to the death of Rajah Byjeh Singh without legitimate heirs in 1856. The young Rajah of Sirmoor assumed the direct management of his territory. Several of the Hill Chiefs received honorary titles and investitures for their services in 1857. Disturbances in Bussahir to the north of Simla were arranged by Mr. Barnes, Commissioner of the Cis-Sutlej States. The reigning Nawab of Bhawulpore died on 5th October 1858, and was peaceably succeeded by his eldest son Ruheem Yar Khan.

Military. All recruiting was stopped, and reduction steadily progressed. The 3 Sikh Companies of Artillery raised in 1857 were broken up. A few Malwa Sikhs in the 10th Punjab Infantry at Dera Ismail Khan conspired against the State. They were transported or dismissed the Service. The numerical strength of the Punjab infantry regiments, both old and new, is being reduced to 600 privates. The disarmed Hindoostanee regiments at Meean Meer and Peshawur, were disbanded and sent to their homes. At Mooltan, owing, it is believed, to misapprehension of the intentions of Government towards them, the 62nd and 69th N. I., which had been disarmed in 1857, broke into open mutiny, attacked the European regiments and endeavoured to seize the guns of the royal battery. They were repulsed with great slaughter. The 11th Punjab infantry, under the command of Captain Denniss, showed an excellent spirit. The great mass of the two regiments were destroyed in cantonments, and those who escaped for the time, and made for the Bhawulpore territory, were brought in from day to day by the police, and were executed. The fragments of the 3rd, 36th and 61st regiments of native infantry, which remained behind when those corps mutinied and broke away from Jullunder, were embodied; and now form a corps styled the "Loyal Poorbeeah Regiment." A wing of the 4th, the 33rd, 58th, and 59th regiments of native infantry, were rearmed. The total of all troops serving under the Punjab Government was 36,840.

Miscellaneous. The people are interested in the cultivation of flax only in Sealkote. Two tons of flax grown in Goojranwalla and valued at £31-10, fetched £90 at Belfast and Dundee. Steps were taken to conserve the Kangra Forest. The wood from the Pangee forests proved inferior. Trees were everywhere being planted on canals and roads. The survey of the Sind Saugor Doab and Cashmere progressed; that of the Mooltan

division was completed. In the Dispensaries 1,24,419 persons were relieved, which shews an increase. 62,470 persons were vaccinated. Drainage was carried out in Loodiana and Lahore, and great conservancy improvements made in Goojrat, Dera Ismail Khan and Mooltan.

Tea.—The yield of the Government plantations, covering some 800 acres, at Holta, in the Kangra district, rose during the year from 13,190 to 26,000 lbs., valued at rupees 52,000. It is estimated that the value of the yield of these plantations will, in a few years, amount to rupees 1,50,000.

DELHI AND HISSAR were formally transferred from the North West Provinces to the Punjab by Act 38 of 1858, but the mutiny had so disorganized the administration that statistics were furnished for only the latter half of the year.

The proceedings of the Special Commission at Delhi resulted in the conviction of 2,025, and in the acquittal of 1,281 persons. Of those convicted, 392 were sentenced to death,—57 to imprisonment for life,—256 to periods of imprisonment varying from 3 to 15 years,—and 126 for shorter terms. Of ordinary criminals, 4,011 were convicted. The total number of crimes reported was 3,114. In the Hissar division, for state offences, 187 persons suffered death,—83 were imprisoned for life,—126 for periods between 3 and 14 years,—and 15 for shorter terms. Both divisions were disarmed. In addition to what was previously collected from the city of Delhi 2,49,776 arms were brought in.

Police.

Numbers.		Total.	Expense including Staff.
Cavalry.	Infantry.		
1,632	1,981	3,613	Rs. 8,77,135 £ 87,713

Revenue.

Year.	Land-Tax.	Spirits, Drugs and Opium.	Salt.	Stamps and Miscellaneous.	Total.
1858-59, ...	39,27,518	1,10,403	27,63,102	7,47,254	75,48,277

Land Revenue.

Year.	Demand.	Collected.	Balance uncollected.	Nominal.	Real.
1858-59,	Rs. 40,64,801	39,27,518	1,37,283	57,781	79,501
	£ 406,480	3,92,751	13,728	5,778	7,950

Of the real balance, Rupees 37,851 were in course of liquidation. There was little difficulty in realizing the Government dues. The Hissar revenue was augmented by the confiscation of the late rebel Nawab of Jhujjur's territory. The Estates of Bullubgurh and Furrucknugger were escheated to the State for rebellion.

At the commencement of 1859 the Punjab and the Delhi territory were placed under a separate Lieutenant Governor. After a brief season, Sir John Lawrence was succeeded by Sir Robert Montgomery.

The Governor General in Council "considers the Report to be highly satisfactory", and thanks the Judicial and Financial Commissioners, and the various officers named, for their valuable services.

ADMINISTRATION OF PEGU.

1858-59.

This is the fourth annual Report on the Province of Pegu, submitted since the country became British territory.

Statement of Area, Population and Revenue of Pegu for the year 1858-59.

DISTRICTS.	Area in sqr. miles.	Population No. of souls.	No. of Townships.	Land Revenue.	Capitation Tax.	Customs.	Fisheries.	Abkaree including Opium.	Miscellaneous Taxes and receipts.	Grand Total.
				Rs.	Rs	Rs	Rs.	Rs.	Rs.	Rs.
Rangoon, ...	9800	195759	15	443291	204017	281064	208917	287192	659010	2083491
Bassein ...	8900	205293	15	250095	213116	52005	106238	50780	72929	745163
Prome, ...	5500	193970	17	213651	206841	467107	7084	15910	32786	943379
Henzada, ...	2200	121529	7	177059	138912	0	42388	32749	30537	421645
Tharrawaddy,	1950	117903	7	98876	96835	0	12478	3655	9627	221471
Toungoo, ...	3900	54518	4	25433	39353	10649	6670	8454	25391	115950
Total, ...	32250	890974	65	1208405	899074	810825	383775	398740	830280	4531099

The following items are not included in this return, viz.

	Rs.	As.	P.
Municipal Fund	82,639	3	7
Bazar Fund	23,005	6	10
Ferries	2,157	4	0
Sale of Land ...	41,021	5	10
Total	1,48823	3	11

Civil Justice.—The great improvement of the year was the establishment of a Court in the town of Rangoon for the trial of Civil suits and Criminal cases. 24,410 suits and 973 appeals were instituted during the year :—

Nature of Suits.	No. of Original Cases.	Number of Appeals.
Debt, ...	10,357	447
Divorce, ...	4,109	31
Land, ...	2,172	227
Other Regular Suits, ...	5,075	265
Execution of Decrees and Miscellaneous, ...	2,697	3
Total, ...	24,410	973

Shewing an increase of 4,428 original cases and of 359 appeals on the previous year. No general cause can be assigned for the increase in the number of Suits instituted. The number of divorce cases increased about fifty per cent. This does not however show that the actual number of divorces increased, but merely that more are now brought before the courts, than formerly. In most cases among the Burmese, where husband and wife agree to separate, they do so by mutual consent, in presence of their friends or the village officers. Generally, it is only when disputes arise concerning the division of their joint property, that they resort to the courts for a divorce. The Administration of Justice was satisfactory. The Judge himself records the evidence of every witness and suits are decided with sufficient rapidity. The Burmese officers decided 20,991 suits and the British authorities 3,353.

Criminal Justice.—The Tseekays and Myookes, the Burmese officers, try petty cases. Of 18,643 persons arrested and brought to trial in all cases, heinous and petty, 11,113 or 59½ per cent. were convicted; 6,972 were acquitted; 207 either died, escaped or were transferred to other Courts and jurisdictions, and 351 were at the close of the year awaiting trial, or were committed to the sessions. Two per cent. remained under trial at the close of the year. Of 46 appeals to the Commissioner, the sentence of the lower court was confirmed in 38 cases, reversed in 5, and 3 were pending. The following statement exhibits the cases committed to the Sessions Court, and the result to the prisoners charged.

CRIMES.	Number of Prisoners tried.	Number convicted.	Number acquitted.	Died.	Escaped.	Number awaiting trial on 31st December 1858.
Murder, ...	38	30	6	1	1	15
Culpable homicide, ...	7	4	2	1	0	0
Dacoity with murder, ...	33	29	2	2	0	17
Burglary with murder, ...	7	6	1	0	0	0
Highway robbery with murder, ...	0	0	0	0	0	3
Forgery, ...	5	5	0	0	0	2
Coining, ...	5	5	0	0	0	0
Rape, ...	13	11	2	0	0	0
Administering narcotic drugs, ...	2	2	0	0	0	0
Unnatural crimes, ...	4	4	0	0	0	1
Embezzlement, ...	2	2	0	0	0	0
Wounding with intent to murder, ...	2	2	0	0	0	5
Rebellion, ...	14	14	0	0	0	5
Total, ...	132	114	13	4	1	48

On 114 prisoners found guilty, the following sentences were passed.

	No. of Prisoners.
Death, ...	12
Transportation for life, ...	46
Imprisonment with hard labour for 16 years,.....	1
Do. for 14 years,.....	15
Do. for 10 years,.....	1
Do. for 9 years,.....	7
Do. for 7 years,.....	14
Do. for periods less than 7 years,.....	18
Total, ...	114

Police.—The force consists of Peons or Constables, under superior officers in towns; of similar officers in villages; of river Police in armed boats for the creeks and lagoons of the Delta, and for the main river; and of disciplined Police battalions, each having two European non-commissioned officers attached, raised for service in three Districts which, during the early occupation of the country, had been deeply disturbed. In Rangoon the river police was strengthened, and Europeans substituted for native

Inspectors. The increase of crime in the town arose from the imperfect disarming of the population in 1858. It was found that the Mountain Karens, from unwillingness to leave their homes, could not be embodied as a disciplined corps, but steps are being taken to enrol them as local Militia for defence against hostile tribes. It is proposed to employ the villagers in the defence of the Prome frontier, supported by disciplined Police and Pegu Light Infantry.

The increase in nearly every description of heinous crime is very serious. Crimes of the first class of atrocity increased from 63 to 101, especially in Rangoon and Prome. Numerous dacoities were committed by ex-frontier bandits, said to be promoted by persons in authority in Burmah. On urgent remonstrance to the Burmese Court, the attacks ceased. The notorious Goung Gyee was shot on the border, by the Burmese local authorities whom he refused to obey. 825 persons were concerned in these 101 crimes. Of these 140 were apprehended and brought to trial; 56 were acquitted, and 65 were committed to the Sessions. 1 was transferred, 1 escaped, and 17 were pending trial at the close of the year. In Gang robberies, and thefts there was a large increase. The number of persons arrested, and of those convicted upon criminal charges of all descriptions, was as follows:—

Year.	No. of persons arrested.	No. of persons convicted.	Proportion of convictions to arrests.
1857	14,297	8670	60
1858	28,643	11,113	59½ nearly.

Only 14 per cent. of the stolen property was recovered, or half that of the previous year.

There was an insurrectionary movement in the district of Rangoon. Nga Shwe Illa, a fisherman, dragged up an image of Buddha in his net. As a Boodhist, he regarded this as an omen of his high destiny, and set up as a religious fanatic. A band of ruffians, not so honest as he, joined him, on the 9th November 1858 took Mr. H. W. Lewis, the extra Assistant Commissioner, prisoner and plundered the Treasury and Court House. The fanatic tried in vain to restrain their violence. On being taken prisoner his life was spared. The people extended no sympathy to him.

A municipal rate was established in Rangoon and seven other towns, levied on the superficial area of dwelling houses. It yielded Rs. 82,639-3 7. The people of Toungoo objected and the cess was postponed.

Jails.—The following statement exhibits the statistics of the several jails during the year, as regards criminal prisoners, laboring and non-laboring:—

Districts.	Average No. of all criminal prisoners daily throughout the year including females & non-labouring convicts.	Number of deaths during the year.	Proportion of deaths to strength.	Cost of each healthy prisoner for one year.	Cost of each sick prisoner for one year.	Remarks.
Rangoon ...	552	56	9 1/2 per cent.	72- 6-10	89-10- 9	Average cost of
Bassein ...	313	20	6 „	76- 6- 7	88- 8- 6	each prisoner is
Prome ...	319	40	12 „	65-11- 2	76- 8- 1	Rs. As. P.
Henzada ...	213	5	2 „	67- 2- 0	85-12- 5	74 15 4
Tharawaddy ...	183	18	9 „	57- 1- 6	93-11- 5	per head per
Toungoo ...	96	21	21 „	98-10- 0	127- 2- 7	annum.

One Medical officer ascribes the high mortality to atrophy arising from the loss of liberty; another to overcrowding, which induced cholera and dysentery; a third ascribes 13 fatal cases of heart disease to the continued action of the arm in stonebreaking. The 456 lbs. daily broken was accordingly reduced to 366, and since then the disease has decreased. The discipline is sufficiently strict.

Land Revenue.—The year 1858 was unfavourable to agriculture. A murrain prevailed among the cattle, thus cramping the labour of the cultivators; and there was a deficiency of rain. The attempt to induce cultivators in a portion of the district of Rangoon to accept leases at a fixed amount for 10 years, failed from a want of unanimity among them. But where the people consent, the plan will be introduced instead of the present annual measurement. The Supreme Government sanctioned an establishment for commencing a land assessment, by placing fixed rates per acre on the tracts of land, termed in the language of the country, *queng*, instead of on extensive circles as heretofore. The advantage of this plan is, that each village tract is reconnoitered, and a rate per acre fixed upon tracts of country having an area generally of three to five hundred acres, in-

stead of as heretofore on circles of twenty or thirty square miles. The system is received as a boon by the people. It is a necessary prelude to a system of long leases for land. The unfavourable character of the year lessened the Export of the great staple —rice :—

Exported.	1857-1858. Tons.	1858-1859. Tons.
By Sea	159,825	1,20,271
By River	26,669	36,440
Total.....	1,86,494	1,56,711

The increased export by river is due to the scarcity which existed in the Burmese territory. But in addition to the amount here shown a considerable quantity, probably about 10,000 tons, was carted across the frontier at various points. Yet the revenue as a whole increased from Rs. 40,81,477 in 1857-58 to Rs. 45,31,120 in 1858-59.

Capitation Tax.—An increase of Rs. 40,000 over the previous year shews a steady advance in the population both by natural increase and by immigration.

The Fisheries exhibit an increase of Rs. 50,000 over the previous year.

The Excise on spirituous liquors and narcotic Drugs shows an increase of nearly 60,000 Rs.

Customs.—Owing to the depressed state of trade there is a decrease in the Inland Customs. The New Tariff which took effect during the last month of the year caused an increase on the Sea Customs of Rs. 30,000 :—

Abstract Statement of the value of all Imports and Exports by Sea and River to and from the Province of Pegu, during the year 1858-59, and amount of duty realized thereon, ending 30th April 1859.

	Names of Port or Custom House.	Value of Exports.			Value of Imports.			Total.			Amount of duty realized.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Sea,	Rangoon, ...	85,66,817	0	7	1,27,43,743	14	8	2,13,10,560	15	3	2,74,695	15	7
Sea,	Bassein, ...	15,41,594	8	3	9,32,878	10	6	24,74,473	2	9	52,005	8	5
River,	Meady,.....	36,35,708	8	0	26,91,452	10	9	63,27,161	2	9	4,63,563	15	8
River,	Toungoo, ...	3,42,897	6	8	4,14,608	2	9	7,57,505	9	5	10,261	14	9
	Total,.....	1,40,87,017	7	6	1,67,82,683	6	8	3,08,69,700	14	2	8,00,527	6	5

REMARKS.

Principal Imports by or on account of Government.

Coals, ...	Rs.	67,720	0	0
Treasure, ...	„	3,25,100	0	0
Military Stores,	„	23,280	0	0
Commissariat Stores, ...	„	3,71,351	8	0
Opium, ...	„	1,99,000	0	0
Total Rupees,		9,86,451,	8	0

Amount of Fines and Confiscations during the year 1858-59, not included in the Amount of Duty.

Total Rupees, 10,397 13 5

The value of the trade is higher than in the preceding year, owing to the higher price of rice, and not to increased quantities of goods.

Timber.—The sale of 20,561 logs realised Rs. 3,75,923, and the Fines &c. 18,089 — in all Rs. 3,94,012.

Education.—There were 55 pupils in the only Government School in Pegu. The Committee express a very favourable opinion of their progress. The attendance at the Karen Normal School at Kemmendine, which receives an annual Grant-in-aid of Rs. 1500, was 118 divided into 12 classes, 5 of which study English. Their proficiency is reported as satisfactory. The pupils pay a fee of 4 and 2 annas a month. A Burmese Female School was established in Rangoon by a Society. At the examination 30 pupils were present. In the district of Rangoon, there are 51 Karen Village Schools, with an average of 516 pupils. The progress of education among the Karen mountain tribes in the District of Toungoo was considerable during the year. This is shown from more school buildings springing up in remote villages. The schools accompany the progress of Christianity, and are supported entirely by the people themselves. In the station of Toungoo, the Karen Female Institute numbers fifty pupils. Some of them have become sufficiently advanced to go out into the further mountain villages as teachers. Government made a Grant of Rs. 3000 for the erection of a building at Toungoo for a Normal School for Karen young men, and of Rs. 1200 for globes and instruments. There were 210 village schools with 3,396 pupils. The results of the labours of the Rev. Dr. and Mrs. Mason among the Karens are spoken of as "splendid." There are thirty village schools also in the Districts of Henzada and Tharawaddy, under the Henzada Mission, in which elementary instruction is given. The grant-in-aid by Government to the Henzada school is Rs. 600. The total number of pupils is 84, of whom upwards of 20 were females. In the District of Bassein there is a Karen Normal School at the chief town, containing 67 male pupils and 8 females. The Rev. Mr. Douglas' Burmese School at Bassein contains 40 pupils. During the year 1858 there were 28 village schools maintained by the Karen Mission in the District of Bassein. They contained 586 pupils. The expense of these schools was borne almost entirely by the people themselves. The number of Karen village schools, however, in the District of Bassein, has decreased below what it was in 1855. In Rangoon, the Roman Catholic Mission has two schools, one for boys, who are taught English, with an average attendance of thirty; and one for girls, who learn Burmese. The latter has 15 pupils. In the interior of the Districts of Rangoon and Bassein, five schools are established,

in which about 100 pupils, Karens and Burmese, are instructed: A press has been established at the station of Myoung-mya, in the District of Bassein, to supply Karen converts with books.

Public Works were restricted to such as were absolutely required for the public welfare. The redoubts for the defence of Thayet-myo and Toungoo were not completed. Several of the military buildings in Rangoon were improved and repaired. A new Jail and a Police office were completed at Rangoon and the Old Jail lengthened. Court Houses at Toungoo and the out station of Tsan-Ywai were built. A new iron church, to accommodate 764 persons, was erected in the Cantonment at Rangoon at a cost of Rs. 65,000. It has been found suitable, but verandahs on the sides would be an improvement. A Dry Dock and Patent Slip on the Dallah side of the Rangoon River were completed, all except the entrance. A Beacon 134½ feet high was completed, at the mouth of the river. A Custom House Wharf of timber was constructed. A public market was built at Myan-Oung in Henzada at a cost of Rs. 2,000.

Post Office.—The expenditure amounted to Rs. 76,795 and the receipts to Rs. 53,048. There was a gradual increase in the number of letters, but the indigenous people make very little use of the Post Office. There were received and despatched 8,52,212 letters, 1,47,058 Newspapers, 8,620 Parcels and 5,992 Books—a total of 9,93,812.

Electric Telegraph.—The total expenditure was Rs. 50,260, of which Rs. 16,000 was for repairs &c. There was a decrease in the number of private messages. The amount realised was Rs. 11,544 and the value of the service messages Rs. 14,928.

Marine.—The flotilla consists of six river steamers and six troop boats. The expenditure was:—

	Rupees.	As.
Flotilla expenses of every description for the year including establishment for the Superintendent.....	2,33,880	10
Naval Yard expenses.....	1,51,630	5
Total Rs.	3,85,510	15

This shews a considerable reduction. The 'Earnings' of the Flotilla were:—

	Rs.	A.	P.
Amount received on account of private freight and passage by steamers, sale of coal, &c. &c.....	54,094	9	3
Value of freight and passage &c. on account of public service.....	1,37,945	11	4
Total Rs.	1,92,040	4	7

and 30,749 9 1 for labour and material supplied by the Naval Yard for private work. There is thus a surplus expenditure of Rs. 1,62,723-1-4 which is in the course of still farther reduction. There was a decrease in the tonnage of Rangoon and Dalhousie owing to the rice crop :—

Year.	Rangoon.		Dalhousie.	
	Number of Ships.	Tonnage.	Number of Ships.	Tonnage.
1857-58	614	217,884	137	37,403
1858.59	466	139,614	84	26,494

The receipts of the port of Rangoon shew nevertheless an increase of Rs. 10,000 or Rs. 49,976 owing to the rise of dues from 4 to 6 annas a ton. In Dalhousie the receipts were Rs. 8,692 and the charges Rs. 10,191.

Financial.—The expenditure on civil administration was :—

	Rupees.
Judicial,	10,08,093
Revenue,	2,81,898
Customs,	77,428
Marine,	4,16,808
General,	5,92,342
Total Rupees	23,76,569—or £237,656

Of this amount, over three-fourths of the Flotilla and Naval Yard charges, amounting in round numbers to Rs. 3,85,500, or £38,500, may be debited to the military defence of the Province. This would leave a little over twenty lakhs of rupees, or £203,900, as the cost of every department of the civil administration during the year.

Political.—The scarcity of food in the Burmese territory caused Border Raids to be more rife than usual. The King of Burmah deputed messengers to Ceylon to take a model of the relic of Guatama there. They returned with the representative

relic. When enshrined within the palace yard it will sanctify the new capital. A report spread, which requires confirmation, that according to ancient Burmese custom (not Buddhist) human victims were buried underneath the gate posts of the new city. The neighbouring Chinese Province of Yunan, up to the latter end of 1858, was still disturbed by the Mahomedan rebels. The Imperial party, though rising in position, did not achieve any decided success. The Chinese caravans which were accustomed to arrive annually, did not reach the Burmese dominion, and the usual trade was stopped. But accounts from the French Roman Catholic Missionaries stationed in Yunan, brought by Chinese Christian messengers, who encountered great hardship on the way, reached Mandelay. The Missionaries appeared to be safe amidst the disturbance, sheltered by their faithful converts. The condition of the petty state of Karen Nee is pretty much the same as heretofore. That is, the Western Chief, Kayay-pho-gyee, represents himself as threatened by the Eastern Chief, Kyau-Pee-tee. A petty warfare is maintained with alternate success, but Kayay-pho-gyee will be protected against aggression from without, on his person and authority. The Karen imposter who, under the title of "Embryo-King," long disturbed the province of Martaban, found shelter in the Eastern State.

Military.—The Pegu Light Infantry behaved well in border warfare. A greater proportion of Malays among them would be an advantage. There were 82 desertions of Burmese during the year, and 2 cases of robbery of treasure under their charge.

Population.—There was an increase over the previous year of 50,771 :—

Men,	...	3,05,530	5,91,709
Women,	...	2,86,179	
Boys, under 16 years,	...	1,57,379	2,99,265
Girls, under 16 years,	...	1,41,886	
Total,	...	...	8,90,974

The several races inhabiting the Province are:

	Number of Souls.
Burmese, ...	6,13,244
Karens, ...	1,39,906
Talaings, ...	85,183
Shans, ...	12,768
Khyengs, ...	12,338
Indians	10,019
Yabaings, ...	5,769
Chinese, ...	1,735
Europeans and their descendants ...	1,070
Jews, ...	78
Other races, ...	8,914
Total,	... 8,90,974

This census does not include the inhabitants of the several military cantonments throughout the Province.

Agriculture is very backward. The Burmese will not use foreign seed for rice, tobacco, and cotton. In the cantonment garden at Rangoon and in several soldiers' gardens, European vegetables were largely raised. The result of the sheep-farm at Thayet-myo was favourable. The people object to cross their small breed of cattle with the taller breed of Nellore and Mysore.

Forests.— 11,000 trees in the forests east of the Sittang, were girdled for felling in future years, and 14,794 logs were brought from the forests to the several depots, against 18,117 in the previous year. The average price realised in 1857-58 was Rs. 24 per ton, and in 1858-59 Rs. 35.

Topographical Survey.—During the past season about 5,600 square miles of country were surveyed, and 430 miles of river triangulated. The total area surveyed, up to the close of the working season, or 1st May 1859, is nearly 32,000 square miles, at an average cost of eight (8) rupees a square mile. The cost of the river survey is higher than that for the land. As little more remains to be accomplished than the completion of the survey of the Delta, and the eastern boundary of the Toungoo District, the establishment will be reduced.

Vaccination.—There were 31 successful cases at Rangoon, and 76 at Henzada; elsewhere the vaccine matter failed.

Miscellaneous.—An attempt was made to establish a trade between France and Burmah. Several artisans designed to be employed in improving the manufactures, the metallurgy and raw produce of the country, were brought out from Bordeaux in a

small French Steamer. Not less than one thousand and thirty-four (1034) elephants were shipped from Rangoon and Maulmain, for the Madras coast and Bengal, during the period extending from December 1857 to April 1859. It may be assumed that so many of these powerful animals were never before, whether in ancient or modern times, conveyed across sea, or otherwise, from one country to another, in the short period of seventeen months, whether for military or other objects. During the same period 340 ponies, 347 carts, and about the same number of bullocks, were also shipped. During the year the Ex-King of Delhi and three other state prisoners, members of his family, with some attendants, were brought to Rangoon. They are kept in close confinement in a wooden building which has been constructed especially for their accommodation. Their arrival did not attract any attention in the country generally. Captain D'Oyley had been successful in inducing the Karens of Toungoo, by moral influence, to abandon their wars upon each other and to set free their slaves. Both the Native Agents had embraced Christianity.

REVENUE ADMINISTRATION OF THE NORTH WESTERN PROVINCES.

1858-59.

On the 22nd June 1859 the Sudder Board of Revenue submits to the Lieutenant Governor of the N. W. Provinces the Revenue Administration Report for 1858-59. The rains of 1857 were favourable both as to duration and distribution, those of 1858 were less abundant; the Rubbee or Spring crops in consequence were above, the Khurreef or Autumn crops below, average.

Land Revenue. – Of a demand of Rupees 4,19,82,617 the sum of Rupees 3,92,87,626 was realized, leaving a balance of Rs. 26,94,991, of which Rupees 8,35,978 is in course of realization, and the remainder doubtful, nominal and irrecoverable. The transfer of the Terai Pergunnahs in Rohilcund to the Kumaon Division, the constitution of Etah as a separate district, and the temporary assumption of charge by Scindia of his own assigned portions of the Jaloun District, cause discrepancies, in the accounts, between the demands of the year and its predecessors. The Balances are necessarily large in those districts where the

assets of the Rubbee were plundered in March and April 1858. These districts are Bareilly and Shajehanpore in Rohilcund; Furruckabad, Mynpooree and Etawah in Agra; Banda in Allahabad; Goruckpore and Azimgurh; Saugor, Dumoh and Mundla in Jubbulpore; and Jhansee.

Coercive Measures were few. In the 67,553 muhals or groups of muhals, 1,42,789 dustuks were issued, Rs. 1,08,189 of Tulubana realised, of which after disbursement, Rs. 18,644 were credited to Government. The Sales of estates were very few, and those mostly in the cases of landholders who deserted their properties to join in rebellion. They were authorized less as a measure to realize arrears from proceeds, than, by extinguishing prior liens beforehand, to give to new holders a secure title. This remark specially applies to the district of Humeerpore. 26 estates were sold yielding a jumma of Rs. 29,584; 132 estates were in farm with a jumma of Rs. 55,086; 35 estates, with a jumma of Rupees 63,909, were transferred; and 28 estates with a jumma of Rs. 60,730 were sequestrated. The decrease in the number of transfers in Putteedaree estates and in sequestrations, is very satisfactory.

Summary Suits and Appeals.—In the Agra Division, the total number of suits instituted, is little short of the former standard. In that of Meerut, in Rohilcund especially with regard to local circumstances, and in the Division of Benares including Goruckpore, the progress made in reverting to that standard, is satisfactory. In those of Allahabad, Jubbulpore, and Jhansee, the statements indicate that time must be allowed before the people can regain the requisite confidence to resort to the summary courts as readily as heretofore. In the Jhansee Division, the return is larger than was anticipated. Sales and other transfers under the orders of the Courts were few, owing to the suspension of the action of the Civil Courts.

The number of Suits instituted and disposed of was as follows: —

	Instituted.				Decided.				Adjusted or withdrawn.			
	Suits for rent, revenue or replevin.	Exaction.	Ouster.	Total.	Suits for rent, revenue or replevin.	Exaction.	Ouster.	Total.	Suits for rent, revenue or replevin.	Exaction.	Ouster.	Total.
	1	2	3	4	5	6	7	8	9	10	11	12
1858-59,	14,947	2,052	4,050	21,049	10,557	1,272	2,696	14,525	4,023	674	1,481	6,178
1855-56,	26,039	2,418	4,530	32,987	19,562	1,161	3,064	24,287	5,420	686	1,488	7,594

The number of suits appealed to the Collector was as follows:—

	Instituted.				Decided.				Adjusted or withdrawn.			
	Suits for rent, revenue or replevin.	Exaction.	Ouster.	Total.	Suits for rent, revenue or replevin.	Exaction.	Ouster.	Total.	Suits for rent, revenue or replevin.	Exaction.	Ouster.	Total.
	1	2	3	4	5	6	7	8	9	10	11	12
1858-59,	490	85	292	867	419	66	274	759	26	0	11	37
1855-56,	1,128	75	377	1,580	1,073	72	367	1,512	20	1	7	28

The number of Summary Suits appealed to the Commissioner was as follows:—

	Instituted.				Decided				Adjusted or withdrawn.			
	Suits for rent, revenue or replevin.	Exaction.	Ouster.	Total.	Suits for rent, revenue or replevin.	Exaction.	Ouster.	Total.	Suits for rent, revenue or replevin.	Exaction.	Ouster.	Total.
	1	2	3	4	5	6	7	8	9	10	11	12
1858-59,	63	4	84	151	51	3	76	133	8	1	2	11
1855-56,	163	19	53	235	151	22	52	225	20	6	7	33

The following shews the Proprietary Mutations registered under order of Court or by private transfers consequent on sale, mortgage &c.

	Under Orders of Court.				By Private Transfer.				
	Sale.		Number of other Cases.	Total number of Cases.	Sale.		Succession number of Cases.	Mortgage, &c. number of Cases.	Total number of Cases.
	Number of Cases.	Aggregate Jumma of property transferred.			Number of Cases.	Aggregate Jumma of property transferred.			
	1	2	3	4	5	6	7	8	9
1858-59,	857	2,65,617	1,403	2,260	1 890	4 45 574	13,025	2 530	17,445
1855-56,	1,680	8,17,811	2,052	3 732	2,497	12,82,011	4 625	4,013	11,135

The following shews the Mutations in the Malgoozaree Register under orders of Court or by private transfers consequent on sale, mortgage &c.

	Number of Cases by Decree of Court.		Number of Cases by Private Transfer.		
	By sale, gift, &c.	By mortgage or other temporary alienation.	By sale, gift, &c.	By mortgage or other temporary alienation.	By succession.
	1	2	3	4	5
1858-59, ...	292	304	1,164	1,295	7,150
1855-56, ...	591	370	894	1,349	5,455

Village Papers.—Notwithstanding the Rebellion the annual rendition was made for 79,076 villages out of 98,119 inclusive of the Kumaon division, where the practice does not obtain.

Abkaree.—The statements show the mere financial result for 12 months, a considerable increase in demand, and still more of collections, compared with 1857-58. The nett Revenue was

1855-56.	1857-58.	1858-59.
Rs. 20,89,631	10,55,537	16,80,146

Stamps.—The nett revenue for 1855-56 was 13,56,060, for 1857-58—4,17,126, for 1858-59—10,42,696. The re-action is considered satisfactory with reference to the long suspension of civil suits in several parts of the country, especially in Rohilcund and Bundelcund.

Sayer.—The Statements shew Rs. 1,14,658 against Rs. 67,933 in the previous year.

The total area of the N. W. Provinces is 1,14,982 square miles of 640 acres. The population is 3,09,77,258; the num-

ber of pergunnahs 511 ; and of Mehals 89,902. The number of cases in the Collectors' offices pending at the close of last year, was 18,791, and of cases instituted during the year 2,82,665, or 3,01,456 in all. Of these 2,40,058 were disposed of in trial; 7,596 adjusted or withdrawn ; 15,861 on default, and 38,316 were pending at the close of the year. From Collectors to Commissioners 13,430 letters were written and from Commissioners to Collectors 12,468. The annual expense of collecting the revenue, exclusive of heads of offices, covenanted and uncovenanted sudder establishment, was 3·6·5 per cent.

Separate Customs Revenue, hitherto the subject of a separate report, is embraced this year in the General report :—

	1858-59.	1857-58.	1856-57.	3 years antecedent to 1856-57.
Salt, ...	33,01,896	7,03,399	43,58,468	35,02,746
Sugar, ...	2,34,077	98,178	1,98,461	3,42,271
Sundries, ...	1,32,241	74,878	11,935	10,233
	36,68,214	8,76,455	45,68,864	38,55,300
		Increase in 1858-59.	Decrease in 1858-59.	Decrease in 1858-59.
		27,91,759	9,00,650	1,87,086

The increase, as compared with previous years, is highly satisfactory. The following is the financial result of all the branches of revenue :—

Land Revenue, ...	3,92,87,626
Abkaree, ...	16,80,146
Stamps, ...	10,42,696
Sayer, ...	1,14,658
Customs, ...	36,68,214
Grand Total, ...	4,57,93,340

REVENUE ACCOUNT OF THE EAST INDIAN RAILWAY

For the Half Year ending December 31, 1858.

Captain Hodgson, in charge of the office of Government Consulting Engineer, reports that the return shews an increase of income over the corresponding half year of 1857, but also an increase in the expenditure at a still higher ratio.

Gross Earnings ...	...	Rs. 9,39,549
Expenses ...	...	„ 5,22,452
Profits ...	...	„ 4,17,097

But the profits have decreased :—

On the corresponding half year of 1857 by	Rs. 47,143
Preceding half year „ ...	... „ 75,664

The Chief Engineer explains the increased expenditure as caused by the trial made of iron sleepers, and argues that as the whole line to Delhi derived benefit from the trial, the expenditure should be made a charge against Capital. Thus the profits would become Rs. 4,68,857. The expenses and profits therefore are respectively 50 1 and 49·9 per cent. of the whole earnings.

Assuming the outlay on the opened line up to the present time to be Rs. 1,50,00,000 or £ 1½ million, the profit on the Capital is at the rate 6¼ per cent. per annum against 6½ per cent. in the preceding half year. ... ... Rs. A. P.

The Gross Earnings per train mile have been	3	14	1
The working expenses „ „ ...	1	15	1

The percentage of expenses to Revenue has risen from 38·7 on the last half year of 1857 to 50·1 on the last half year of 1858. The growth in the amount of the entire Traffic has not been commensurate with the total increase mileage of Trains, that of the Passenger Traffic having fallen very far short; but in the Goods Traffic alone it is the other way, the increase in Traffic being rather in excess of the increase in mileage which is satisfactory.

The results are thus, as regards Earnings per Train mile :

Ordinary Passenger,	Decrease	...	11·7 per cent.
„ Goods,	Increase	...	2·6 „
Gross Earnings,	Decrease	...	8·4 „

The results however shew a slight improvement upon those of the first half of the same year.

Turning from receipts to working expenses, the table shows a large increase.

The total working expenses have *increased*, on the half year of 1857 by 60·5 per cent.

The percentage of working expenses to Revenue has increased on 1857 by 29 per cent.

The working expenses per Train mile increased on 1857, by 18·7 per cent.

The maintenance of way was economically maintained, being 7¼*d.* per mile in the 1st half of 1857, 6¾*d.* in the 2nd half, 6½*d.* in the 1st half of 1858, and 7*d.* in the 2nd half. In the locomotive department there was a material decrease in the cost of fuel and an unavoidable increase in every other point, in proportion to the work done by the engines.

On the 3rd October an additional length of 20 miles was opened :—

Working Results on the E. I. Railway for the Years 1856, 1857 *and* 1858 *(in English Money.)*

Periods.	Length of Railway open.	Receipts per Mile for			Expenditure per Mile of Railway open for							Expenditure per Train Mile for						Receipts per Train Mile
		Passengers.	Goods.	Total.	Maintenance of Way.	Locomotive Carriages.		Traffic charges.		Police, Pointsmen, Printing, Miscellaneous.	Total.	Maintenance of Way.	Locomotive and Rolling Stock.	Traffic.	Miscellaneous.	Rates and Government Duty.	Total.	On Total Revenue.
						Engines.	Carriages and Wagons.	Coaching.	Merchandize.									
	Miles.	£	£	£	£	£	£	£	£	£	£	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
Half year ending June 1856. ...	121	240	181	421	51	73	4	9	7	27	171	13·29	20·19	4·33	7·09	...	44·90	111.37
Half year ending December 1856	121	240	205	445	51	76	5	11	8	29	180	13·85	21·67	5·32	7·94	...	48·78	119·95
Half year ending June 1857 ...	121	275	297	572	59	95		10	11	32	207	10·94	17·63	3·92	6·05	...	38·54	106·61
Half year ending December 1857	121	323	295	618	65	114		24	12	29	244	10·4	18·4	5·85	4·60	...	40·25	133·625
Half year ending June 1858 ...	121	325	384	709	70	130		43	40	4	324	8·40	15·84	10·08	5·04	...	39·36	91·87
Half year ending December 1858	131	323	383	709	78	135		47	52	46	359	10·1	17·6	12·8	7·6	...	46·6	93·1

On the whole the line has been worked and maintained less economically than before.

The following table shows a useful comparison between the working results of the Home and East Indian Railways :—

		Receipts per mile of Railway open.	Expenditure per mile of Railway open.	Expenditure per train mile.	Receipts per train mile.	Proportion per cent. of expenditure to receipts.
		£	£	*d.*	*d.*	
England 1856	...	3175·92	530·71	34·32	72·00	49·
Scotland „	...	2068·36	969·69	29·52	62·88	47·
Ireland „	...	1082·10	426·59	34·32	83·28	39·
East Indian	1856 ..	433·	175·5	46·94	115·66	41·
	1857 ..	595·	225·5	39·89	104·1	37·
	1858 ..	687·	346.	35·63	90·2	50·

The total number of passengers carried on the East Indian Railway during the entire year of 1858 was 1,172,852, and the number per mile of Railway open was 8,952.

As to expenditure ; on comparing the East Indian with home railways, the Locomotive management is good, and the Maintenance of Way exceedingly heavy, while the traffic and general charges ought both to be reduced. The number of passengers per mile on the East Indian Railway is greater than the number in Ireland, nearly equal to that of Scotland, and a little less than three-fifths that of England.

The mileage return shows that Special Trains ran a distance of 4,186 miles during the half year.

REVENUE ACCOUNT

OF THE

GREAT INDIAN PENINSULA RAILWAY

For the Half Year ending December 31, 1858.

These are the first Returns for a half year since the opening of the Line to Poona, and also include one fortnight's traffic of the portion from Poona to Diksal, 64 miles, opened on 15th December 1858.

The open Lines were—

The Concan Line.

	Miles.
From Bombay to Campoolia via Kullian, including a branch of one and a half miles at Malim...	51⅔
Branch to Wassind	16⅓
Total ...	68

The Dekkan Line.

From Campoolia to Khandalla unfinished, being the Bhore Ghat Incline. Khandalla to Poona ... Miles	39½
Poona to Diksal ... ... „	64¼
Total ...	103¾

Total of both Lines, miles 171¾; but as 64 miles out of this total length were open for only a fortnight, an average total length of 135¾ miles of open Line has been assumed for the calculations, and of 47¾ miles for the Dekkan line.

The total gross receipts were ...	Rs.	6,64,254	1	0
The expenses of maintenance and working	„	2,87,997	14	4
Net Receipts or Revenue { Amount	„	3,76,256	3	7
{ Percentage on Capital per annum		£4	5	10
The gross receipts were { Per mile open	„	4,884	3	6
{ Per train mile	„	3	14	3

The Returns from Passenger traffic were on the whole satisfactory, and on the Concan line highly so. The Deputy Superintending Engineer remarks the 3rd class has maintained a steady increase, and the 2nd class has perceptibly improved. The receipts from Goods Traffic are unsatisfactory. The expenses as compared with the receipts are 43.35 per cent. Compared with the principal European and American lines the G. I. P. Railway returns as good a dividend as any:—

	Cost of construction per mile.	Receipts per mile per annum.	Working expenses per mile.	Proportion of net Revenue to Capital.	Proportion of working expenses to Gross Revenue.
	£	£	£		Per cent.
Austria	16,378	2,190	1,150	6·32	52·70
Belgium...	16,391	2,158	1,260	5·48	58·16
France	25,668	2,706	1,191	6·58	44·01
England	39,275	3,161	1,564	4·06	48·00
Prussia	14,101	1,877	968	6·22	51·59
America	8,275	1,234	666	6·70	54·00
Great Indian Peninsula Railway	8,253	901	370	6·4	41.

The net revenue of the Concan line was equivalent to £6-6 per cent. per annum on its cost, and of the Deccan portion to £4-11-7 :—

The cost of fuel in the G. I. P. was very heavy. Per engine per mile it is, as compared with others.

G. I. P.	Rs.	0-5-1
Madras		4-1
E. I. R.		1-3
Great Britain		2-0
France		3-9
Germany		3-3
America		5-0

The reduction of the rates for 2nd class passengers caused an increase in the receipts. The rates for Goods traffic were still too high.

REVENUE ACCOUNT
OF THE
MADRAS RAILWAY
For the Half year ending December 31, 1858.

The gross receipts were

Coaching ...	Rs. 1,29,943	per train mile	Rs.	1	10	10
Goods ...	„ 1,09,435	„	„	1	6	3
Total ...	„ 2,37,378	„	Rs.	3	1	1
The expenses were	„ 1,57,722	„	„	2	1	2
Net Earnings or Revenue ...	„ 5,79,656					

The expenses being, therefore,
66·44 per cent.
And revenue ... 33·56 „

The small extent of the traffic is the cause of this unsatisfactory result, the expenses not being unduly high. The traffic on this Railway has not yet reached a properly remunerative extent, but a slight increase in the profits on previous half years is shewn. The results show a loss in the 1st and 2nd Class, and a gain in the 3rd Class Passengers by both Trains, a loss in the Goods carried by the fast, and a gain in those carried by the slow Trains. The railway was open during the half year 96 miles from Madras to *Goriattum*. From the Tables given, we compile the following as the General Results of the working of the three Indian Railways :—

General Results of the Working of the three Indian Railways.

Name of Railway.	Period.	Length open.		PASSENGERS. 1st Class.	2nd Class.	3rd Class.	Total.	Total receipts from Coaching.			Receipts from Merchandize.			Total Receipts.		
				No.	No.	No.	No.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
E. I. Railway.	1857. July to December.	121 Miles	Total	7,026	26,389	489,171	522,586	390,370	10	8	356,563	0	11	757,352	6	8
			Per mile open	58	218	4,043	4,319	3,226	3	2	2,946	12	10	6,259	1	9
			Per T. mile... Passenger	·08	·33	6·21	6·64	4	15	4	3	8	11	4	3	9
			Per T. mile... Total ...	·04	·14	2.73	3·08	2	2	11	1	15	1			
	1858. July to December.	131 Miles	Total	8,445	28,051	555,082	591,578	424,251	10	0	505,232	3	4	939,549	4	9
			Per mile open	64	214	4,237	4,515	3,239	3	11	3,856	11	9	7,172	2	0
			Per T. mile... Passenger	·08	·27	5·37	5·72	4	1	8	3	10	2	3	14	1
			Per T. mile... Total ...	·03	·12	2·29	2·44	1	12	0	2	1	4			
G. I. P. Railway.	1857. July to December.	89 Miles	Total	5,390	15,362	362,412	383,164	201,952	3	4	156,603	4	5	358,555	7	9
			Per mile open	61	173	4,072	4,305	2,269	1	11	1,759	9	4	4,028	11	3
			Per T. mile .. Passenger	·10	·29	6·88	7·28	3	13	5	3	11	7	3	12	7
			Per T. mile .. Total ...	·06	·16	3·82	4·04	2	2	1	1	10	6			
	1858. July to December.	136 Miles	Total	6,970	41,708	505,138	553,816	374,081	0	1	289,233	7	2	664,254	1	11
			Per mile open	51	307	3,714	4,072	2,750	9	6	2,126	11	4	4,884	3	6
			Per T. mile... Passenger	·09	·55	6·63	7·27	4	14	7	3	0	11	3	14	3
			Per T. mile... Total ...	·04	·24	2·95	3·24	2	3	0	1	11	3			
Madras Railway.	1858. July to December.	96 Miles	Total	398	5,965	133,747	140,110	129,942	10	1	107,435	8	3	237,378	2	4
			Per mile open	4	62	1,393	1,459	1,353	9	0	1,119	2	0	2,473	0	0
			Per Train mile	·005	·08	1·7	1·8	1	10	10	1	6	3	3	1	1

General Results of Expenditure on the three Indian Railways.

Name of Railway.	Period.	Length open.	Train Mileage.	EXPENDITURE.						
				Maintenance of Way.	Locomotive Department.	Traffic Department. Coaching.	Traffic Department. Merchandize.	General Charges.	Steam Ferry.	Total.
				Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
E. I. Railway.	1857. July to December.	121 Miles	Per Cent. of Total Expenditure	26·6	46·6	7·9	6·9	11·8	·2	100
			Per Cent. of Gross Earnings	10·2	18·1	3·1	2·6	4·6	·1	38·7
	1858. July to December.	131 Miles	Per Cent. of Total Expenditure	21·7	37·7	10·9	12·5	12·9	4·3	100
			Per Cent. of Gross Earnings	10·9	18·9	5·4	6·2	6·4	2·2	50
G. I. P. Railway.	1857. July to December.	89 Miles	Per Cent. of Total Expenditure	24·0	47·8	8·8	9·2	10·2	.....	100
			Per Cent. of Gross Earnings	11·2	22·3	4·2	4·3	4·8	.....	46·8
	1858. July to December.	136 Miles	Per Cent. of Total Expenditure	13·5	48.7	11·3	16·2	10·3	.....	100
			Per Cent. of Gross Earnings	5·8	21·1	4·9	7·0	4·4	.....	43·3
Madras Railway.	1858. July to December.	96 Miles	Per Cent. of Total Expenditure	40·4	29·9	13·2	10·5	6·0	.....	100
			Per Cent. of Gross Earnings	26·8	19·8	8·8	6·9	4·0	.....	66·4

COLONIZATION AND SETTLEMENT (INDIA.)

Parliamentary Papers.

The Select Committee of the House of Commons, re-appointed on the 10th June 1859 to inquire into the Progress and Prospects, and the best Means to be adopted for the Promotion of European Colonization and Settlement in India, especially in the Hill Districts and Healthier Climates of that country; as well as for the Extension of our Commerce with Central Asia, consisted of Messrs. William Ewart, Henry Baillie, Gregson, Kinnaird, Knight, Lowe, Arthur Mills, Richardson, Danby Seymour, John Benjamin Smith, Vansittart, and Villiers, Colonel Sykes and Sir Erskine Perry. Their report is dated 9th August 1859.

Settlement must be distinguished from Colonization, for which, in the ordinary sense, India offers none of the usual inducements—high wages, the facility of obtaining land at an easy rate, the enjoyment of a constitution framed after that of the mother country, a temperate climate, and the prospect of forming a part of a community speaking our language and conforming to our manners and customs. Unlike Ceylon, the exclusion of free settlers has marked the origin and progress of Indian Government and, even now, though the principle of free settlement has been recognized by British Legislation, traces of the exclusive system still linger. Doubt is felt by legal authorities as to whether Europeans can, without a licence, enter those parts of India acquired within the present century, and this doubt should be removed by legislative enactment. Wherever Europeans have settled, a marked improvement in the country has followed. They took the lead in introducing steam navigation, they discovered coal and iron, they extended roads and generally lowered the cost of production. They come more into contact with the native mind. A large extension of their number would be a considerable guarantee against any future insurrection.

Climate.—Its dangerous effect has been considerably exaggerated. The Planters who gave evidence resembled English farmers.

Hill Districts.—There is hardly a province throughout India in which there are not such available for civil and military residence. They will tend more than any other circumstance to attach European families to India. The population of Darjeeling doubled itself in two years, and wealth also increased as in an Australian settlement. The slope of the Neilgherries, which was a forest haunted by tigers in 1845, became a flourishing colony in 1856. There are three climates at different elevations. The tea and coffee plants thrive. Fuel is sold at 2*s.* and 6*d.* a ton. The population of Ootacamund increased from 9,383 in 1848 to

56,900 in 1856. The profits of one coffee estate were 100 per cent. The Pulney, Shevaroy and Coilamully Hills enjoy a delightful climate. The Baramahl, Coimbatoor and Travancore Hills have not yet been explored. Mysore is of all countries the most favourable for settlement. In or near Assam and Cachar are most favourable positions for settlers. The climate of the Cossya Hills is described as a delightful and beautiful one. The cost of living is in all about £120 a year, and in three years the receipts of a settler would cover his expenses.

Roads.—For the greater part of a century the Indian Government did not make a main line of road. The Grand Trunk Road was not begun before Lord William Bentinck in 1836. Still roads, except in Mysore, have either no existence or are useless. Settlers, by their own exertions or complaints, have always caused an improvement. The Local Committees formed to attend to the roads are an obvious mode of interesting and instructing the natives in the practical management of their own concerns.

Transit Duties, though abolished in the English parts of India, are still retained in some of the native states. The Zemindars on the Godavery arbitrarily levy such duties.

Irrigation is the key to the material prosperity of India, and with it to the social and moral improvement of the people. It increases the amount of products three-fold. In Rajahmundry the people who imported food to the amount of £36,000 annually, now export £300,000 annually, owing to irrigation. Irrigating and navigable canals should be combined. Cheapness of transit is all important for India. No toll for transit need be levied on such canals, since the income from irrigation will abundantly supply its place. The profits on works of irrigation are stated at from 30 to 40 or 50 per cent.

Cotton.—The evidence as to the necessity of cheap transit for the extension of cotton cultivation, bears out the opinion of the Committee of 1848. Captain Haig especially insisted on the opening up of the Godavery. If it be made navigable, cotton may be brought from Berar to a port for shipment at the cost of one-eighth of a penny per pound, the present cost of carrying it from Berar to Bombay on the backs of bullocks being 1½*d.* a pound. Great loss is now caused by the admixture with the cotton of dirt, refuse, and water, added for the purpose of increasing the weight of the cotton. These artifices would at once be checked by European superintendence and European machinery. In 1856, 112,000 acres of New Orleans cotton were under cultivation in the South Mahratta country. It was introduced in 1845. Mr. Landon's machinery in Guzerat for clean-

ing cotton, does the work of 3,000 natives, and the cotton fetches a high price. Spinning cotton has been successful in Bombay.

Wheat can be grown more cheaply in India than in America. "Any extent of wheat," says Sir John Lawrence, "can be grown there;" and "sells at harvest time at about 40 lbs. for a shilling." The finest wheat was sold at Jubbulpore at 12 *s.* a quarter. Wheat and barley grow extremely well in Sind, but for want of due means of transit, the grain is left to rot on the ground. The price of excellent wheat on the banks of the Godavery, says Captain Haig, is 1*s.* or 1*s.* 6*d.* a bushel; a large portion of which might be made available for export at Coringa.

Tea.—It is probable a taste for Tea will spread in India, and that Himalaya tea will displace that of China in Central Asia. "The culture of the Tea plant opens an immense futurity to settlers from Europe." In 1840 the Assam Tea Company, formed in 1837, produced, 10,000 lbs. weight of tea; in 1858 the production had risen to 770,000 lbs.; this year (1859) the production will probably exceed 8,000,000 lbs.; and in four years hence it will probably rise to 2,000,000 lbs. There are now at least 20 factories in operation in different parts of the province. In Debrooghur, where not long ago the jungle was infested by wild elephants and beasts of prey, there are 10 plantations. The cultivation is now extending itself in Middle and Lower, as in Upper Assam. The profits of the Assam Tea Company amount to nine per cent. per annum. But it is probable that much higher returns of profit would be obtained by individual enterprise. Twelve tea companies are established in Cachar. Colonel Vetch says Assam contains more waste land than would supply all England with tea.

Hemp.—The war with Russia called out the fibre-producing power of India. The impetus thus given to the production of fibrous plants, appears likely to continue. Hemp, equal to the best hemp of Russia, if it were only, like Russian hemp, sorted and selected, might be grown within the Saugor and Nerbudda territories sufficient for the consumption of all England.

Flax.—There is a great want of a supply for the linen manufacture of England, which, with a good supply, might be doubled. There is promise of abundance in the Punjab, but the right mode of preparing it is not understood. For its export Kurrachee has the advantage of St. Petersburgh in being open throughout the year. The best mode of dealing for a European, is to buy the article from the native instead of cultivating it ourselves.

Coal and Iron.—Railway communication has opened the coal of Burdwan, and will open that of the Nerbudda District, bringing both into connexion with a supply of iron. The coal

of the Nerbudda is stated to be peculiarly good, and especially adapted to the purposes of steam conveyance. Very good coal is also to be found in Assam, as well as iron ore, neither of them far from the waters of the Bramahpootra. General Tremenheere speaks of large masses of iron seen projecting from the hills of Tenasserim, and of considerable deposits in Kumaon and Gwalior. Captain Haig describes immense stores of iron ore as resting on the banks of the Wain Gunga, a tributary of the Godavery. The iron of Jubbulpore will be developed by the railway passing near it; there are 1,200 small furnaces there already. The people of Sheffield, according to the statements of the Mayor and Master Cutler of that place, highly value the iron from Porto Novo, in the Presidency of Madras; it is as good as Swedish iron, and if it could be sold at a moderate price it would almost supersede the use of Swedish iron.

Trade with Central Asia. We have on the other side of the Himalayas and Sulymani range, two principal opponents in the fair and open rivalry of commerce—the Russians and the Chinese. Russia's object is to comprehend with her power the whole of Central Asia. She has steamers on the Sea of Aral and its tributaries, the Amoo Daria, the ancient Oxus. From Asterabad the key of Central Asia, her Cossack posts extend almost the whole way to China. The Khan of Khiva is said to be at her beck. Even within the Chinese territories she has now a place of ingress into China, on its western side, many hundred miles nearer than her former frontier town, Kiachta. This place is named Tchoubachach. It is held to be of great importance to the future commerce of Russia with China. Our cottons and hardware would be preferred to those of other countries. Our broadcloths are highly valued in Thibet, but we are excluded from it by the Chinese. Immense quantities of wool come from Affghanistan and Beloochistan into the Punjab. There is gold in Thibet. All the central tribes are supplied with what is called 'brick tea' from China at an immense distance, and ours could well compete with it. By the routes across the Himalayas and the Indus, through the Bolan, Gundava and other passes, the interior would be opened up.

Police.—The want of a vigorous yet considerately administered police system, is principally felt in Lower Bengal. It is maintained by witnesses from Bengal, that the "state of the police, as well as of the laws, would deter many Englishmen from settling there." Among the natives it is said that nearly three-fourths of the crimes committed are suppressed, to prevent the oppression caused by the inquiries of the police. It is maintained that many cases of torture exist, or, at all events, that the police would torture, if they dared; the charge of torturing

the ryots is also brought by the missionaries, in their petition, against the zemindars. Lattials or club-men stand ready tobe hired to fight. An efficient body of police would lessen the necessity for a numerous army.

Law.—The great want in the administration of justice in India is uniformity of the substantive law, and of the procedure with which that law was administered. No time should be lost in framing a code which may embrace the civil rights of men of all races and creeds under the same rules, with due reservation of their customs, and respect to their religions. Lord Macaulay's penal code was intended to supply this want in criminal matters, but that code has not yet become law; and a civil code, although recommended by the late Law Commission, is not even begun. As regards procedure, a uniform code of pleading and practice has been passed for the mofussil, but the Supreme Courts of the Presidency towns still continue to administer justice under the forms of common law, equity and civil law. The judicial system of India will never be placed on a sound and satisfactory basis till all the Courts are organised into one harmonious whole, and until, by an amalgamation of the Supreme and Sudder Courts, the highest and most learned tribunals in the land shall be courts of appeal to the whole country, and serve as a pattern and example to inferior courts administering law under the same procedure.

Legal Title to Land.—There should be a power to call the claimant at once into Court to stop the endless fictitious claims. The ryot's title to land, left uncertain since Lord Cornwallis, should be ascertained. They are generally at the mercy of the Zemindars. The Khoodcast tenure should be declared by law. A putneedar should be allowed to exempt himself from forfeiture involved in the superior estate by paying his portion of the land-tax separately. After due inquiry and sale, no appeal should be allowed, registration should be made of all transfers of property, and such registration should be compulsory.

Law of Contract of a uniform character is much desired by settlers. The limitation for bringing actions should be, as in the Punjab, six years; and Sir John Lawrence thinks even that might advantageously be diminished.

English Language in the Courts.—The party against the use of English in the Courts, consists chiefly of Civilians. Another party would limit its use to superior Courts of law in the great cities." In favour of the introduction of the English language, it has been stated that even the language now used in the courts of Bengal, the Hindee, is not generally understood by the people of Bengal, nor very much more understood than the Persian language (then the legal language) was ten years ago. The

European judge himself does not always fully understand the proceedings. In Western and Southern India several different languages prevail, which the judge cannot know; and good interpreters can be easily obtained. Interesting evidence is given by many witnesses, and among them by Sir John Lawrence, on the importance of extending a knowledge of the English language among the natives, and of their willingness and aptitude to learn it. They therefore suggest that we should act as the French and other nations do in their colonies (indeed, as we do in Ceylon), and freely use our own language; or take the proceedings down in English, as is done in the Supreme Court; where every question is put in the witness's language as well as in the language of the judge. Finally, justice would be better administered through the medium of a language fully understood by the judge; and the natives would eventually value the court, not according to the language used, but according to the justice administered, in it. Against the use of the English language, it is said that, after its adoption, the natives would "lose all confidence in the courts;" that such a policy "might endanger our empire;" that you would (in such case) "touch a chord which would vibrate from north to south and from east to west; that the natives would think it a gross injustice, and a badge of conquest;" in short, "it would be the greatest misfortune which could possibly happen to the country." The natives have the highest opinion of the integrity of English judges both in the civil service and in the Supreme Courts.

Judicial Training, according to several witnesses, is wanting in the body of civilians.

"*Black Act.*"—Great alarm has been caused amongst Europeans in India by the apprehended intention of extending the power of natives to try Europeans in criminal cases. The measure which raised these apprehensions has been entitled the "Black Act." They do not seem to object to the decision of civil cases by the native judges, but to an extension of the power of trying Europeans by the native criminal courts, which they declare are the dread and terror of the people. They deprecate the idea of being subjected to imprisonment by the decision of a native, perhaps, of inferior moral character, willing to show and exercise his power over Europeans. It is said by Mr. Theobald, the representative of the planters, that "if Europeans are liable to be tried by the local tribunals, there is not an European in the country who would be safe." Mr. M'Kenzie says, "No European should be tried by natives. He will not get a fair trial." Mr. Marshman also is of opinion, that "it is not desirable to place Europeans under the criminal jurisdiction of any native; least of all after the feelings developed in the late mutiny;" nor,

he adds, "would the settlers bear it." It appears that the Law Commission, from which the apprehended measure emanated, never supposed that "the magistrate would refer a criminal case in which an European was defendant to a native judge;" and Mr. Hawkins, the Secretary to the Law Commission, "would himself object to an European being tried by a native." Of the same opinion, also, is Mr. Neil Baillie, for many years Government Vakeel and Under Secretary to the Law Commission, a gentleman long and intimately versed in the law proceedings of India.

Affray Bill.—It is objected to this Bill that on the charge of an affray, both parties are put on their trial, and considered to be criminals, instead of the party against whom the charge is brought, and against whom the evidence proponderates. The Recognisance Bill is also objected to as onerous on settlers; it is said to empower magistrates to take heavy penalty-bonds from a settler on the mere charge of a police officer, or darogah.

Native Judges.—The natives seem to have improved in their capacity as civil judges, and general testimony is borne to their good faith in mercantile transactions.

Resumptions.—It is maintained that good faith has been violated by the Government in certain cases, where a full right of ownership in the land has been first allowed, and then withdrawn from the natives. These Acts of Resumption are said to have created great distress 20 years ago, when lakhiraj-lands were resumed in Bengal. Mr. Marshman states that "the resumption of these lands has caused great disaffection;" and that the Government had "allowed its claims to sleep too long." Mr. Hawkins bears testimony to the "strong feeling in favour of the old landowners," or talookdars, in India; and more than one witness maintains the interference with talookdarries to have been one cause of the late rebellion. It is obviously too late to require natives, after 60 or 70 years' possession, to prove their title to a property in land; but the "resumptions" which appear to have produced the greatest sensation are those of the "enams," or rent-free lands, after a long lapse of years, in Bombay.

Acquisition of land in Fee-Simple and Redemption of Land-Tax.—During the investigation of the Committee, Government conceded these two points. Purchasers of the fee-simple of land should have the power of paying their purchase money by instalments. It is said that the redemption of the land-tax and the possession of land in fee, would strengthen our rule both among the zemindars and ryots. "It would," say the Bengal Missionaries in their Petition to Parliament, "at once encourage the capitalist and the small tenant to make investments in

land." Government would be released from the expense of collecting the land tax, and landowners would be gainers, by being relieved from the exactions of the native tax collector. It appears also that the principle of redemption is approved of in the minutes of many of the officers of Government, as Mr. Ricketts, Mr. Dunbar, and others. Major Wingate, Mr. Theobald and others gave opinions adverse to the redemption of the land tax.

Field Assessment System.—The field assessment system of Bombay, adopted there since 1847, is stated by Major Wingate to be favourable to the investment of capital in land by settlers; under it the settler can take of the Government any quantity of land without being the sub-tenant of a zemindar, and without suffering from the zemindar's forfeitures, as he would do in Bengal.

Enlargement of Legislative Council.—The witnesses concur in the introduction of non-official Europeans and natives into the Legislative Council of India. The example of Ceylon is quoted to show the good effects of this reform. One of the defects of the Legislative Council is a want of local knowledge. Such knowledge the reform suggested would supply.

Local Government.—It appears to the Committee that there is wanting in India less of central, and more of local, government. It is stated by Major Wingate, that "the administration in Bombay is paralysed by the centralization of supreme authority in Bengal." Roads may be wanted in Bombay, but the want of roads in Bombay cannot be equally appreciated in Bengal. On the other hand, it is stated, that to the officers of the other Presidencies Bengal itself is "nothing less than a foreign country."

Forced Labour &c.—Ryots may be withdrawn from the service of Companies or individuals by the agents of Government. Instances of the arbitrary exercise of this power are given. It gives an opportunity for the tyranny of intermediate power, so often exercised in India without the real knowledge, though under the apparent authority, of the Government. It would be a great advantage for India to possess a well-regulated, well-secured, and at all times convertible paper currency; in short, a Government paper. Silver, for reasons which became obvious when the influx of Californian and Australian gold set in, was made the only legal tender in India. Even just before the rebellion, it was the practice to convey a lakh of rupees guarded by a hundred soldiers.

The Report concludes by expressing satisfaction with the improved state of feeling between the settlers and the natives. When natives are treated with respect and honestly

dealt with, Europeans may acquire great influence over them. Drunkenness is a great obstacle to the settlement of the poorer class of Europeans in India. "Every Englishman should go to India with a deep sense of his responsibility, not only to those whom he is about to govern or among whom he is about to reside, but to his own country; whose character for firmness, justice, and forbearance he is bound constantly, zealously, and by personal example, to maintain."

EXTERNAL COMMERCE OF BOMBAY, 1858-59.

Mr. Spooner, the Reporter General on External Commerce, prefixes Introductory Remarks to the elaborate statements which constitute the body of the Report.

I. Bombay.

In 1833-34 the Imports amounted in value to Rs. 3,93,08,583 and the Exports to Rs. 4,27,89,837, of which upwards of a million on both sides was treasure. In 1834-35, the Imports had decreased to Rs. 3,81,66,248 and the Exports to Rs. 3,64,75,809. The gigantic increase since that period is shewn in the following Statement of the Trade for the last five years:—

Years.	Imports.	Exports and Re-Exports.
1853-54	8,43,83,627	9,50,71,893
1854-55	7,82,52,261	8,16,98,816
1855-56	11,57,73,041	10,29,19,161
1856-57	14,48,46,391	12,57,93,939
1857-58	16,31,60,036	14,67,53,599
	58,64,15,355	55,22,37,408
Five Years' Average Value	11,72,83,071	11,04,47,481
Value for 1858-59	18,38,15,410	15,95,08,825
Increase in 1858-59	6,65,32,339	4,90,61,344

The Trade of Bombay still continues to increase; and it now may be considered, in a commercial point of view, as the Capital of India. The following tabular statement will tend to show the growing importance of the Port. The realisations at the Bombay Custom House, which only five years since were Rs.

2,52,000 per month, or Rs. 30,24,000 per annum, now amount to Rs. 5,14,100 per month, or Rs. 61,69,200 per annum :—

Statement showing the Amount of Collections, in round numbers (omitting fractions of hundred Rupees), at the Town Custom House every Month from May 1854 to April 1859.

Months.	1854-55.	1855-56.	1856-57.	1857-58.	1858-59.
May ... ... Rs.	3,05,800	2,33,800	2,29,000	3,74,800	4,70,100
June ... ... „	2,31,900	2,02,100	2,40,700	2,61,900	3,90,800
July ... ... „	1,36,700	1,28,800	2,05,100	2,50,900	3,65,300
August ... ... „	2,13,600	1,49,200	1,85,000	2,09,000	4,47,300
September ... „	2,79,000	2,13,700	1,84,000	2,38,600	3,56,100
October ... ... „	2,02,200	2,40,700	2,87,600	2,75,500	6,48,100
November ... „	3,05,000	2,12,200	3,13,100	3,49,300	5,36,300
December ... „	3,46,000	3,55,300	3,01,600	4,30,800	4,89,800
January ... ... „	2,13,100	2,98,500	3,21,200	4,08,700	5,86,600
February ... ... „	3,45,400	2,87,100	2,10,900	3,41,700	5,84,300
March ... ... „	2,65,700	3,52,400	3,69,000	4,34,800	5,08,800
April ... ... „	1,79,900	3,70,700	3,66,000	4,57,800	7,96,400
Rupees	30,24,300	30,44,500	32,13,200	40,33,800	61,69,900

Imports.—The chief places from which the Import Trade of Bombay is derived are,—

	Value.
1, United Kingdom ... ... Rs.	6,54,81,594
2, Coast of Africa ... ... „	30,25,247
3, China ... ... „	3,66,82,542
4, Penang, Singapore, and Straits of Malacca ... ... „	28,38,130
5, Persian Gulf ... ... „	85,18,315
6, Sucz ... ... „	2,54,06,292
7, Calcutta ... ... „	72,52,442
8, Malabar and Canara (British and Foreign) ... ... „	87,14,165
9, America, North ... ... „	6,05,669
10, Arabian Gulf ... ... „	18,23,920
11, Batavia and Java ... ... „	1,18,959
12, Ceylon ... ... „	26,01,339
13, France ... ... „	17,8 ,257
14, Mauritius ... ... „	10,18,185
15, Siam ... ... „	4,87,602
16, Moulmein ... ... „	1,49,171
17, Aden ... ... „	24,85,018
18, Cutch ... ... „	93,58,032
19, Guzerat, Foreign Ports ... „	23,68,690
20, New South Wales ... „	12,19,709

21, Goa, Demaun, and Diu	...	Rs.	4,90,520
22, Sonmeanee and Meckran	...	,,	1,94,166
23, Fort St. George ...	...	,,	6,13,985

The chief items of Import from the United Kingdom were,—

			Value.
1, Cotton Goods ...	..	Rs.	3,48,70,959
2, Machinery ...	...	,,	9,99,258
3, Malt Liquor ...	...	,,	16,71,611
4, Metals... ...	...	,,	67,45 407
5, Manufactured Metals	...	,,	14,52,864
6, Military and Naval Stores	...	,,	34,02,093
7, Railway Materials ...	...	,,	64,13,066
8, Wines and Spirits ...	...	,,	21,71,472
9, Woollens	...	,,	12 94,834

From the Coast of Africa the chief Imports were,—

			Value.
1, Ivory	...	Rs.	10,98,250
2, Spices	..	,,	7,77,039

From China the chief Imports were,—

			Value.
1, Silk and Silk Piece Goods	..	Rs.	51,94,769
2, Sugar and Sugar Candy	..	,,	14,42,624
3, Tea	...	,,	12,25,661

From Penang, Singapore, and Straits of Malacca the chief Imports were,—

			Value.
1, Cotton Goods ...	..	Rs.	1,16,941
2, Metals	..	,,	6,14,449
3, Silk and Silk Piece Goods	...	,,	4,14,568
4, Spices	..	,,	1,70,578
5, Sugar and Sugar Candy	..	,,	5,25,808
6, Tobacco ...	..	,,	69,492

From the Persian Gulf the chief Imports were,—

			Value.
1, Horses ..	...	Rs.	24,71,000
2, Drugs and Dyes ..	...	,,	2,89,430
3, Fruits	...	,,	7,78,531
4, Precious Stones ..	...	,,	6,07,800
5, Wool	...	,,	3,44,593
6, Silk and Silk Piece Goods	...	,,	1,58,394

The chief Imports from Suez were,—

			Value.
1, Apparel ...	...	Rs.	1,19,470
2, Books and Stationery	...	,,	81,390
3, Jewellery ...	...	,,	42,456

4, Metals ..	...	Rs.	60,345

The chief Imports from Calcutta were,—

		Value.
1, Cotton Goods ..	...	Rs.	6,61,439
2, Dyes ..	..	...	1,51,192
3, Grain ...	..	..	3,87,221
4, Gunnies ..	..	...	13,14,430
5, Naval Stores	..	...	„	1,27,177
6, Silk and Silk Piece Goods		...	„	10,86,236
7, Spices ..	..	...	„	1,12,429
8, Sugar ...	...	...	„	27,96,525

From North America Cotton Goods to the value of Rs. 2,50,416, Ice to the value of Rs. 14,600, Tobacco to the value of Rs. 2,29,413, and Timber to the value of Rs. 23,256, were imported. From the Arabian Gulf Gums of the value of Rs. 1,98,771 were imported. From Moulmein Timber to the extent of Rs. 1,46,191 was imported. From Cutch Horses to the value of Rs. 1,47,000 were imported. From foreign ports in Guzerat, Precious Stones valued at Rs. 1,15,718; from New South Wales, Metals valued at Rs. 3,97,735 and Railway materials at Rs. 5,02,842; from Goa, Demaun and Diu, Fruits valued at Rs. 3,64,198; from Fort St. George Cotton Goods valued at Rs. 3,36,398, Dyes at Rs. 34,518, Grain at 61,250 and Precious Stones at Rs. 03,300, were imported. In respect to Bullion and Specie, the chief Imports at Bombay were from the following places :—

			Value.
1, United Kingdom...	...	Rs.	9,94,639
2, Aden		„	14,92,974
3, Africa, Coast of	...	„	8,13,425
4, Arabian Gulf	...	„	12,74,372
5, Bourbon ...	...	„	80,400
6, Ceylon ...	...	„	24,03,287
7, Hong-Kong ...	...	„	2,41,33,831
8, China ...	...	„	28,16,561
9, France ...	..	„	4,05,800
10, Mauritius ...	..	„	6,99,535
11, New South Wales	...	„	2,74,740
12, Penang and Singapore	...	„	2,53,088
13, Persian Gulf ...	...	„	35,26,450
14, Suez ...	...	„	2,49,13,450
15, Calcutta ...	...	„	42,522
16, Fort St. George ...	...	„	41,500
17, Malabar and Canara (British and Foreign) ...	...	„	54,022
18, Cutch ...	...	„	25,000

The Total value of Imports in 1858–59 is Rupees 18,38,15,410, whereas in the preceding year the value amounted to Rupees 16,31,60,036; showing an increase in the value of Imports to the extent of Rupees 2,06,55,374. There is an Increase in Merchandize to the extent about of Three Crores of Rupees; in Horses to the extent of about Thirteen Lacs of Rupees;—while in Treasure there has been a decrease of about One Crore of Rupees.

The Increase in the Imports at Bombay was as follows:—

Names of places.	1857-58.	1858-59.	Amount of Net Increase.
	Rupees.	Rupees.	Rupees.
United Kingdom	4,13,30,998	6,44,86,955	2,31,55,957
Africa, Coast of ...	19,95,796	22,11,822	2,16,026
China.....	74,24,177	97,32,150	23,07,973
France.....	5,85,791	13,75,457	7,89,666
New South Wales	3,50,215	9,44,969	5,94,754
Penang, Singapore & Straits of Malacca.....	15,02,755	25,85,042	10,82,287
Persian Gulf.....	34,62,768	49,91,865	15,29,097
Calcutta.....	62,81,815	72,09,920	9,28,105
Fort St. George	2,11,288	5,72,485	3,61,197
Cutch.....	72,13,815	93,33,032	21,19,217
	Total Increase.....Rs.		3,30, 4,279

The chief increase from the United Kingdom was in,—Cotton Goods, Rupees 1,71,60,473; Apparel, Rupees 1,74,056; Books and Stationery, Rupees 2,15,214; Glass Ware, Rupees 1,08,564; Malt Liquor, Rupees 6,96,165; Manufactured Metals, Rupees 5,39,966; Metals, Rupees 15,76,241; Railway Materials, Rupees 22,90,763; Spirits, Rupees 3,88,882; Wines, Rupees 8,99,681; and Woollens, Rupees 2,43,962.

The Decrease in the Imports at Bombay was as follows :—

Names of places.	1857-58.	1858-59.	Amount of Net Decrease.
	Rupees.	Rupees.	Rupees.
Antwerp.....	2,05,926	1,09,545	96,381
Arabian Gulf.....	7,32,395	5,49,548	1,82,847
Moulmein.....	3,83,216	1,49,171	2,34,045
Malabar and Canara (British and Foreign).....	1,05,44,734	86,60,143	18,84,591
Guzerat.....	24,70,889	23,68,690	1,02,199
	Total Decrease.....Rs.		25,00,063

Exports. The chief places to which Goods were exported from Bombay are :—

		Value.
United Kingdom	Rs.	4,84,65,442
Hong-Kong	„	4,64,00,541
China	„	1,84,73,991
France	„	26,49,582
Persian Gulf	„	84,33,504
Siam	„	1,96,843
Mauritius	„	10,73,028
Suez	„	7,95,541
Aden	„	9,79,930
Africa, Coast of	„	13,58,851
Arabian Gulf	„	17,31,092
Penang, Singapore, and Straits of Malacca	„	16,57,506
Malabar and Canara (British and Foreign)	„	95,62,663
Cutch	„	69,69,244
Amsterdam	„	2,16,334

The chief items of Export to the United Kingdom were :—

		Value.
Cotton Wool	Rs.	2,98,64,309
Hides and Skins ...	„	5,22,017
Oils	„	6,86,038
Saltpetre	„	4,99,391
Seeds	„	73,66,818

Cashmere Shawls ...	Rs.	22,07,717
Wool	„	33,80,056

To Hong-Kong the chief Exports were,—

		Value.
Opium	Rs.	3,87,83,692
Cotton Wool	„	68,12,770

To China the chief items of Export were,—

		Value.
Cotton Wool	Rs.	10,26,792
Opium	„	1,73,21,785

To France the chief items of Export from Bombay were:—

		Value.
Coffee	Rs.	2,47,225
Seeds	„	16,64,116
Cashmere Shawls ...	„	4,03,247

To Suez the chief Exports from Bombay were,—

		Value
Cashmere Shawls ...	Rs.	71,797
Precious Stones	„	6,46,092
Silk		19,035

There were exported, to Aden Cotton Goods valued at Rs. 4,63,804; to the Coast of Africa Beads valued at Rs. 93,588, and Cotton Goods at Rs. 5,94,461; to the Arabian Gulf, Cotton Wool valued at Rs. 61,425, Cotton Goods at Rs. 7,74,705, Gram at Rs. 1,83,021 and Spices at Rs. 1,11,390; to the Straits Cotton Wool valued at Rs. 5,60,531, and Cotton Goods at Rs. 2,40,796, and Opium at Rs. 4,24,645; and to Amsterdam Cotton Wool to the extent of Rs. 1,85,700. In respect to Bullion and Specie, the chief Exports from Bombay were to the following places,—

		Value
Aden	Rs.	74,856
Africa, Coast of	„	27,000
Arabian Gulf	„	1,19,850
Ceylon	„	26,18,900
France	„	25,000
Mauritius	„	5,65,667
Penang and Singapore ...	„	1,64,686
Persian Gulf	„	5,87,225
Calcutta	„	25,21,404
Fort St. George	„	1,35,260
Malabar and Canara (British and Foreign)	„	47,49,865
Moulmein	„	10,000
Cutch	„	35,30,720

Goa, Demaun, and Diu ...	Rs.	1,04,226
Guzerat, Foreign	„	6,21,381

The total value of Exports in 1858-59 was Rupees 15,95,08,825, while in 1857-58 it was Rupees 14,67,53,599; showing an increase of Rupees 1,27,55,226.

Merchandize	Opium ... Rs. 5,65,78,067 Other Goods „ 8,70,66,168	Rs.	14,36,44,235
Horses (none)		„	.....
Treasure		„	1,58,64,590
	Total Rupees		15,95,08,825

1857-58.

Merchandize	Opium ... Rs. 4,36,40,205 Other Goods „ 8,02,86,340	Rs.	12,39,26,545
Horses (none)		„	.....
Treasure		„	2,28,27,054
	Total Rupees		14,67,53,599

Increase in Merchandize in,—

1858-59	Rs.	1,97,17,690
Deduct Decrease in Treasure	„	69,62,464
Total	Rs.	1,27,55,226

The quantity of Opium exported was 41,171 chests, valued at Rs. 1,374 per chest.

The Increase in the Exports from Bombay was as follows :—

Names of places.	1857-58.	1858-59.	Amount of Increase.
	Rupees.	Rupees.	Rupees.
United Kingdom...	4,42,29,746	4,84,65,442	42,35,696
China	4,76,94,170	6,48,70,332	1,71,76,162
Persian Gulf	58,91,771	78,46,279	19,54,508
Calcutta	14,26,643	22,66,734	8,40,091
Malabar and Canara (British and Foreign).....	46,46,792	48,12,798	1,66,006
Cutch	25,39,050	34,38,524	8,99,474
Goa, Demaun, and Diu	3,77,497	5,17,039	1,39,542
Suez.....	5,00,126	7,90,291	2,90,165
	Total Increase.....Rs.		2,57,01,644

There was a Decrease in Exports from Bombay to the places noted below :—

Names of Places.	1857-58.	1858-59.	Amount of Decrease.
	Rupees.	Rupees.	Rupees.
Aden.....	14,14,955	9,05,074	5,09,881
Amsterdam.....	4,60,022	2,16,334	2,43,688
Arabian Gulf.....	20,23,475	16,11,242	4,12,233
Gibraltar.....	5,32,418	2,47,630	2,84,788
France.....	43,15,311	26,24,582	16,90,729
Hamburg.....	1,99,565	900	1,98,665
Mauritius.....	7,59,952	5,07,361	2,52,591
Penang, Singapore and Straits of Malacca.....	19,51,039	14,92,820	4,58,269
Fort St. George...	3,96,271	2,73,979	1,22,292
	Total Decrease.....Rs.		41,73,136

The items of increase in Exports to the United Kingdom were in,—Hides and Skins, Rupees 1,08,056 ; Oils, Rupees 83,973 ; Saltpetre, Rupees 2,20,159 ; Seeds, Rupees 41,07,954 ; Cashmere Shawls, Rupees 5,17,335 ; and Ivory, Rupees 6,96,100. The chief increase in Exports to China was in,—Cotton Wool, Rupees 40,73,093 ; and Opium, Rupees 1,28,26,022. The increase in Exports to the Persian Gulf was in,—Cotton Goods, Rupees 10,05,389 ; Grain, Rupees 74,264 ; and Shawls (Cashmere), Rupees 1,12,991. The increase in Exports to Calcutta was in,—Cotton Wool, Rupees 4,82,002 ; Cotton Goods, Rupees 1,80,256 ; and Spices, Rupees 78,086.

There was a new Export trade in 1858-59 to Madagascar and Manilla. The Exports to Madagascar were chiefly in,—Cotton Goods, Rupees 19,375 ; Manufactured Metals, Rupees 2,481 ; Paint and Colors, Rupees 2,745 : Porcelain and Earthen-ware, Rupees 3,320 ; and Sundries, Rupees 9,928. The Exports to Manilla were only in Wax and Wax Candles, Rupees 1,394.

Statement, showing the Number of Vessels which have Arrived at the Port of Bombay from 1854-55 *to* 1858-59, *inclusive.*

Arrivals.	1854-55.		1855-56.		1856-57.		1857-58.		1858-59.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1	2	3	4	5	6	7	8	9	10	11
Under British Colors	234	1,56,845¼	253	1,92,129	378	3,07,647½	478	3,84,007	373	2,88,917¾
„ American „	14	11,887	21	19.427	37	38,569	39	33,848	40	42,555
„ French „	16	5,136	34	12,904	68	32,542	92	43,440	62	28,714
„ other Colors	21	7,291¼	12	4,943	31	12,830	55	28,527	37	18,199
Total ...	285	1,81,159½	320	2,29,403	514	3,91,588½	664	4,89,822	512	3,78,385¾
Steamers	46	37,983	43	38,982	54	50,390	81	69,356	80	69,080¾
Total Vessels and Steamers..	331	2,19,142½	363	2,68,385	568	4,41,978½	745	5,59,178	592	4,47,466½
Native Craft	4,899	1,85,700	5,845	2,23,524¼	6,927	2,50,180½	6,623	2,42,846¾	6,015	2,58,034½
Grand Total.....	5,230	4,04,842½	6,208	4,91,909¼	7,495	6,92159	7,368	8,02,024¾	6,607	7,05,501

Statement, showing the Number of Vessels which have Departed from the Port of Bombay since 1854-55 *to* 1858-59, *inclusive.*

Departures.	1854-55.		1855-56.		1856-57.		1857-58.		1858-59.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1	2	3	4	5	6	7	8	9	10	11
Under British Colors	247	1,61,176½	262	1,96,431¾	369	2,88,542½	470	3,71,904	396	3,09,461½
„ American „	12	6,860	20	19,888	30	30,642	32	25,721	38	35,528
„ French „	14	4,373	31	11,401	54	23,817	88	44,347	62	32,176
„ other Colors	21	9,680¾	11	3,776	27	10,922	45	24,378¼	31	15,604
Total ...	294	1,82,090¼	324	2,31,496¾	480	3,53,923½	635	4,66,350¼	527	3,92,769½
Steamers	34	21,562	34	20,910	56	33,468	80	47,818	81	51,983
Total Vessels and Steamers..	328	2,03,652¼	358	2,52,406¾	536	3,87,391½	715	5,14,168¼	608	4,44,752½
Native Craft	3,735	1,47,067¾	4,372	1,67,824½	5,672	2,24,263¼	5,333	2,12,999	4,858	2,02,680¼
Grand Total	4,063	3,50,720	4,730	4,20,231¼	6,208	6,11,654¾	6,048	7,27,167¼	5,466	6,47,432¾

There is here a decrease in respect to Arrivals of 153 vessels or 20 per cent. and in Departures of 107 or 15 per cent. This result is attributed to the extraordinary increase in the previous year, and the arrival of a smaller number of European soldiers and of a smaller quantity of pipes for the Vehar Water Works.

Cotton.—The quantity of Cotton imported at Bombay in 1858-59 was 23,77,88,595 lbs., and the value, calculated at the rate of Rupees 141 per Bombay Candy of 784 lbs. avoirdupois, was Rupees 4,27,04,917. During the preceding year the quantity imported was 20,29,81,531 lbs., of the value of Rupees 3,53,82,238. Cotton is for the most part exported to Great Britain and China. The quantity exported in 1857-58 and 1858-59 was as follows:—

Names of Places.	1858-59.		1857-1858.	
	Quantity.	Value.	Quantity.	Value.
1	2	3	4	5
	lbs.	Rupees.	lbs.	Rupees.
To Great Britain ...	15,72,89,419	2,98,64,309	18,53,56,315	3,13,36,005
To China	3,86,07,749	78,39,562	1,92,37,031	37,66,469
To other places ...	1,10,18,706	18,71,768	3,61,39,941	52,75,230
Total Rupees	20,69,15,874	3,95,75,639	24,07,33,287	4,03,77,704

STATEMENT showing the QUANTITY of COTTON Imported into the Port of Bombay for the last Five Years, distinguishing the Districts from whence it was brought to Bombay.

WHENCE.	Average of Five Years.	
	Quantity.	Value.
	lbs.	Rupees.
Guzerat	9,78,37,642	1,48,04,137
Concan (the produce of Districts of the Ghauts)	6,12,93,835	83,80,548
Malabar and Canara ...	2,07,87,533	29,10,080
Cutch	3,77,32,143	54,48,924
Africa, Coast of	3,965	364
Arabian and Persian Gulfs, including Aden	2,00,278	20,031
Hong-kong	67	3
Kurrachee	1,01,904	14,566
Goa	1,04,314	11,017
Mauritius	13,104	1,500
Sonmeanee & Meckran	1,568	164
Total	21,80,76,353	3,15,91,334

STATEMENT of the Quantity and Value of COTTON EXPORTED from BOMBAY during the last Five Years.

To what Place.	Average of Five Years.	
	Quantity.	Value.
	lbs.	Rupees.
Aden	67,043	8,313
Africa, Coast of ...	63,432	7,655
America, North	2,778	810
Amsterdam	11,74,898	1,48,920
Antwerp	9,44,463	1,34,016
Arabian Gulf	4,08,205	55,309
China { Hong-kong ...	93,73,036	18,93,864
China { Other Ports...	2,54,32,285	38,76,761
France	25,31,822	3,41,598
Genoa	17,31,598	2,21,719
Germany	3,19,719	52,092
Gibraltar	12,84,735	1,64,171
Great Britain	16,99,70,567	2,64,17,571
Hamburg	4,32,374	56,150
Mauritius	8,081	1,317
Penang, Singapore, and Straits of Malacca ...	31,69,182	5,02,177
Persian Gulf	1,47,160	13,179
Rotterdam	3,31,358	65,065
Siam	46,110	7,043
Suez	84 330	10,805
Trieste	8,24,886	1,20,054
Calcutta	11,25,482	1,98,177
Coromandel, Coast of...	31,856	2,653
Malabar and Canara, British	1,14,590	20,770
Malabar, Foreign ...	51,105	5,285
Ports in Cutch	5,096	475
Goa, Demaun, and Diu	823	123
Guzerat, British and Foreign	7,824	940
Concan, ditto ...	4,954	441
Sind	23,553	1,924
Total ... Rupees	21,97,13,445	3,43,29,377

BOMBAY PRICE CURRENT OF MERCHANDIZE,

For the Year ending 30th April 1859.

Nos.	Articles.	How Sold.	Lowest Price.	Rs.	A.	P.	Highest Price.	Rs.	A.	P.	Total Quantity Imported.	Total Quantity Exported.
1	2	3	4				5				6	7
1	Alkali (Sajeekhar)	Per cwt.	1858 Aug.	1	4	0	1859 March	1	14	0	6,237	...
2	Aloes, Socotra	„	„ Oct.	27	0	0	1858 May	39	0	0	1,542	759
3	Assafœtida	„	1859 Mar.	54	0	0	1859 April	55	0	0	1,034	557
4	Betelnut, Acheen	„	„ April	4	12	0	1858 Aug.	5	8	0	85,944	10,482
	„ Malabar	„	1858 Aug.	8	8	0	1859 April	9	4	0		
5	Brimstone, Country	„	„ July	5	8	0	„ „	9	0	0	3,229	296
6	Camphor, China	„	„ Dec.	36	0	0	„ Jan.	43	8	0	1,655	455
7	Canvas, Bengal	Per bolt.	1859 Feb.	6	8	0	„ March	9	0	0	2,792	..
	„ Europe	„	1858 Oct.	14	0	0	1858 May	16	0	0	10,912	..
8	Cochineal	Per lb.	„ July	1	13	0	1859 April	2	1	0	1,14,131	32,951
9	Coffee, Malabar	Per cwt.	„ May	25	2	0	1858 Oct.	28	8	0	32,724	38,379
	„ Mocha	„	1859 Jan.	30	0	0	„ Nov.	36	0	0	8,076	
10	Cordage, Europe	„	1858 June	15	0	0	1859 April	16	0	0	5,780	..
11	Cotton, Concan	Per candy.	„ May	110	0	0	„ Jan.	135	8	0	1,09,532	..
	„ Cutch	„	1859 Feb.	133	8	0	1858 Sept.	152	0	0	52,869	..
	„ Guzerat	„	„ „	140	0	0	„ „	161	0	0	1,17,650	..
	„ Malabar	„	1858 June	110	0	0	1859 Jan.	140	0	0	22,742	..
12	Cowbezoar	Per lb.	„ May	20	0	0	„ April	20	0	0	...	112
13	Elephants' Teeth	Per cwt.	1859 Feb.	113	8	0	1858 Nov.	120	0	0	6,627	4,266
14	Fishmaws	„	1858 May	37	8	0	1859 April	37	8	0	834	1,629

Nos.	Articles.	How Sold.	Lowest price.				Highest Price.				Total Quantity Imported.	Total Quantity Exported.
1	2	3	4				5				6	7
					Rs.	A.	P.		Rs.	A.	P.	
15	Galls, Persian	Per cwt.	1858 Nov.		43	0	0	1859 April	45	0	0	938	3,287
16	Ginger, Malabar	„	1859 April		10	0	0	„ Mar.	13	8	0	25,301	13,828
17	Gums —												
	Ammoniac	„	„	„	13	8	0	„ Feb.	17	8	0	448	179
	Arabic	„	„	„	14	8	0	1858 Oct.	19	0	0	4,123	2,602
	Benjamin	„	„	Mar.	45	0	0	1859 Feb.	49	8	0	3,770	714
	Copal	„	„	April	90	0	0	1858 Oct.	93	0	0	2,185	1,999
	Myrrh	„	1858	Aug.	36	0	0	1859 April	39	12	0	1,370	711
	Olibanum	„	1859	Feb.	14	0	0	„ Mar.	20	0	0	28,141	28,650
18	Gunnies	Per 100 Pieces.	1858 Dec.		24	0	0	„ „	29	0	0	49,58,814	7,44,174
19	Hemp	Per cwt.	1859 Mar.		7	12	0	1858 July	9	8	0	6,758	3,678
20	Indigo, Cutch	„	1858 July		227	8	0	1859 April	240	0	0	11	3,148
21	Metals —												
	Anchors	„	„	May	6	8	0	„ „	6	8	0	...	...
	Copper, Bolt	„	„	Dec.	64	8	0	1858 July	75	8	0	...	...
	„ Jayan	„	1859	April	52	0	0	„ June	53	0	0	1,630	1,241
	„ Nails	„	„	„	50	0	0	„ May	58	8	0	523	203
	„ Plates	„	1858	July	60	0	0	„ „	69	8	0	...	...
	„ Raised Bottoms	„	„	Dec.	62	0	0	„ „	75	0	0	379	...
	„ Sheathing ...	„	„	July	60	0	0	„ May	69	8	0	7,022	...
	„ Sheet	„	„	Nov.	60	0	0	„ „	74	0	0	42,968	9,629
	„ Tiles	„	„	July	64	0	0	1859 Mar.	67	8	0	6,575	3,502

Nos.													
	Iron, Swedish, Bar ...	Per cwt.	1858 June	7	5	0	1859 Feb.	8	4	0	47,360		14,600
	„ British	„	„ „	3	12	0	„ April	4	10	0	2,11,460		49,620
	„ Hoop	„	„ „	5	2	0	„ Feb.	6	6	0	7,642		5,096
	„ Nails	„	„ May	10	0	0	„ April	10	0	0	5,118		819
	„ Rod or Bolt ...	„	„ June	5	0	0	1858 Aug.	6	0	0	40,580		32,560
	Quicksilver	„	„ Dec.	115	8	0	1859 April	142	8	0	381		1,169
	Spelter	„	1859 April	14	0	0	1858 May	16	8	0	32,847		3,945
	Steel, British	„	1858 June	11	2	0	1859 Feb.	12	10	0	980		4,188
	„ Swedish	„	„ „	9	0	0	„ „	10	8	0	16,799		1,043
	Tin Plates	Per box of 125 sheets.	1859 April	14	2	0	1858 May	20	0	0	... ...		.....
	Lead, Pig and Sheet ...	Per cwt.	„ Feb.	11	2	0	„ Dec.	11	14	0	10,131		1,132
	„ Red	„	„ Mar.	12	12	0	„ May	14	8	0	9,361		1,309
	„ White	„	1858 June	8	0	0	1859 April	10	0	0	1,906		
22	Musk	Per lb.	„ May	100	0	0	„ „	100	0	0	2½		20
23	Opium	Per chest.	„ June	1,237	0	0	„ „	1,552	8	0	... ...		41,171
24	Pachuck or Ooplate ...	Per cwt.	„ Aug.	11	4	0	„ „	14	4	0	... ...		4,336
25	Pitch	Per barrel.	„ Oct.	4	0	0	„ „	7	8	0	... ...		... .
26	RAW SILK—												
	Radanugger, 1st sort ...	Per lb.	„ April	5	6	0	1858 Aug.	6	4	0	1,47,948		
	Banack, 2nd sort ...	„	„ „	5	8	0	„ „	6	3	0			
	China, 1st sort ...	„	1858 Oct.	6	0	0	„ July	7	8	0	15,08,337		2,93,086
	„ 2nd sort ...	„	„ „	5	6	0	„ May	7	4	0			
	Bussora	„	„ Dec.	5	10	0	„ July	6	2	0	71,708		
27	Rhubarb	„	„ Aug.	0	7	0	1859 Feb.	0	13	0	... ...		... ...
28	Rice, Boiled	Per bag of 168 lbs.	„ Nov.	6	6	0	„ April	9	4	0	1,10,442		64,690
29	Safflowers	Per cwt.	1859 April	16	8	0	„ Feb.	21	0	0	... ...		1,165
30	Saffron, Bussora	Per lb.	1858 May	5	8	0	„ April	5	0	0	53		315
	„ Europe ...	„	„ Sept.	10	0	0	„ Feb.	20	0	0	2,428		315
31	Salammoniac	Per cwt.	1859 April	2	0	0	1858 July	2	8	0	37		514

Nos.	Articles.	How Sold.	Lowest Price.						Highest Price.						Total Quantity Imported.	Total Quantity Exported.
1	2	3	4						5						6	7
						Rs.	A.	P.				Rs.	A.	P.		
32	Saltpetre	Per bag of 168 lbs.	1859	Feb.		11	0	0	1858	Dec.		12	8	0	3,672	99,388
33	Sandal Wood	Per cwt.	„	April		24	0	0	„	June		25	8	0	10,061	12,517
34	Senna, Garbled	„	1858	Dec.		8	8	0	1859	April		10	10	0	6,847	2,846
35	Sharkfins	„	„	May		37	8	0	„	„		47	8	0	6,615	8,064
36	Spices—															
	Cardamoms	„	„	„		172	8	0	„	„		172	8	0	3,705	1,353
	Cassia	Per lb.	1859	Mar.		0	4	6	1858	Dec.		0	6	6	14,38,791	10,06,620
	Cloves	Per cwt.	„	April		16	8	0	„	May		21	6	0	44,666	18,428
	Mace	Per lb.	„	Mar.		0	10	0	„	„		0	13	0	44,483	9,170
	Nutmegs	„	„	„		0	12	0	1859	April		0	13	0	1,63,501	10,156
	Pepper, Malabar ...	Per cwt.	„	„		17	0	0	1858	Nov.		19	8	0	55,422	23,223
	,, Malay... ..	„	„	April		19	4	0	„	May		20	10	0	93	...
37	Sugar—															
	Bengal	Per bag of 168 lbs.	„	Feb.		22	8	0	„	July		30	0	0	2,33,044	1,54,656
	China	Per cwt.	„	Mar.		14	4	0	„	Aug.		24	0	0	49,963	
	Candy	Per quarter tub.	„	April		8	8	0	„	Sept.		10	7	0	50,077	17,752
38	Tar	Per barrel.	1858	Dec.		6	0	0	1859	April		16	0	0	...	...
39	Tea. Hyson and Green ...	Per ½ Pecul.	„	May		60	0	0	„	„		60	0	0	21,566	9,522
40	Tortoise Shell	Per lb.	1859	April		12	0	0	1858	Dec.		13	0	0	6,486	7,222
41	Turmeric	Per cwt.	„	„		8	8	0	1859	Feb.		10	0	0	11,210	13,610
42	Wool	Per candy.	1858	July		115	0	0	„	„		130	0	0	4,842	19,916

II. Continental Ports in Bombay.

Of these there are 12 in the Guzerat and 38 in the Konkun Division, but details are given of those only which have trade with Foreign Ports and Indian Ports not subject to the Bombay Presidency:—

Names of Ports.	1858-59.						Total Amount of Customs received.		
	Amount of Import Customs received.			Amount of Export Customs received.					
	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.
Alibaugh	432	12	7	191	12	5	624	9	0
Bassein	2,079	10	0	3,831	5	10	5,910	15	10
Broach	430	12	5	6,981	10	11	7,412	7	4
Bulsar	1,163	10	2	3,828	13	5	4,992	7	7
Caranjah	51	11	7	7,868	7	2	7,920	2	9
Dholerah	1,405	3	10	39	10	7	1,444	14	5
Gogo	1,129	11	10	101	6	0	1,231	1	10
Ghorebunder	48	6	6	25,914	2	4	25,962	8	10
Jumbooseer	62	11	8	56	1	3	118	12	11
Malwan	1,638	9	8	297	4	7	1,935	14	3
Oolpar	30	10	0	7	0	11	37	10	11
Oomergaum	166	1	7	170	7	8	336	9	3
Panwell	31	13	5	16,255	0	7	16,286	14	0
Parnerah	208	10	4	1,156	7	7	1,365	1	11
Penn	.....			15,066	14	0	15,066	14	0
Rajpooree	69	7	10	4	7	10	73	15	8
Rutnagherry	1,838	1	4	30	0	11	1,868	2	3
Sooverndroog	1,720	13	4	582	10	3	2,303	7	7
Surat	1,194	9	7	3,440	3	4	4,634	12	11
Tarrapore	1,919	10	5	4,120	14	8	6,040	9	1
Trombay	111	2	3	22,059	3	8	22,170	5	11
Unjuhwell	745	0	1	31	11	8	776	11	9
Vingorla	544	13	7	964	14	9	1,509	12	4
Viziadroog	1,647	5	4	719	9	3	2,366	14	9
Wagra	.....			154	1	1	154	1	1
Murrolee	.....			152	0	6	152	0	6
Total ...	18,671	7	4	1,14,026	7	2	1,32,697	14	6

The Import Customs Duty is almost entirely levied on Cocoanuts, Betelnuts, Cotton Seeds, Salt Fish, Oil-cake, and Timber. The amount realized as Export Duty was levied on the following items, viz.:—

	Rs.	As.	P.
On Salt	89,834	15	0
„ Cotton Seeds	5,878	2	9
„ Grain	5,475	8	4
„ Timber	5,918	1	1
„ Other items	6,919	12	0
Total ... Rs.	1,14,026	7	2

The Trade of Government Ports in the Bombay Presidency with Foreign Ports appears to be gradually declining; in fact, the trade of the Port of Bombay is increasing and swallowing up the foreign trade of all of the petty Continental Ports. For instance, Rajapoor, Talooka Viziadroog, Zillah Rutnagherry, was formerly a port of great mercantile importance, and carried on an extensive trade with the Persian Gulf; in olden time also, the British Government had a factory at Rajapoor; but now the Foreign Trade is almost extinguished, and the Port has dwindled down and is now of no importance. The number of vessels which arrived and departed in the case of all these Ports was:—

ABSTRACT.	1858-59.	
	Vessels.	Tonnage.
ARRIVALS.		
Under British Colors	3,117	47,232
„ Foreign „	763	13,088
Total.....	3,880	60,320
DEPARTURES.		
Under British Colors	3,330	64,104
„ Foreign „	786	16,426
Total.....	4,166	80,530

ABSTRACT STATEMENT of the VALUE of TRADE between the Port of BOMBAY and the UNITED KINGDOM, since the opening of the Trade, exclusive of the Government Investments, from 1813-14 *to* 1858-59.

Nos.	Years.	Imports.	Exports and Re-Exports.
		Rupees.	Rupees.
1	1813-14	9,26,980	30,51,543
2	1814-15	13,98,653	27,75,891
3	1815-16	23,03,295	25,94,676
4	1816-17	29,84,586	20,18,463
5	1817-18	48,95,198	47,60,004
6	1818-19	70,90,236	77,36,155
7	1819-20	56,02,508	56,80,608
8	1820-21	36,16,219	14,89,728
9	1821-22	43,94,208	25,38,395
10	1822-23	56,24,719	52,46,502
11	1823-24	55,71,313	59,53,859
12	1824-25	50,24,043	58,87,881
13	1825-26	43,02,425	64,92,462
14	1826-27	49,55,872	39,38,817
15	1827-28	81,96,939	56,85,923
16	1828-29	78,12,484	83,37,672
17	1829-30	91,16,060	54,73,294
18	1830-31	1,10,66,366	68,40,096
19	1831-32	90,23,156	63,60,268
20	1832-33	1,10,82,688	1,04,17,737
21	1833-34	90,42,390	1,01,84,795
22	1834-35	94,05,846	96,95,473
23	1835-36	1,24,81,965	1,46,17,001
24	1836-37	1,32,41,910	1,35,29,317
25	1837-38	1,12,79,113	85,44,276
26	1838-39	1,11,77,650	76,49,694
27	1839-40	1,38,73,733	1,19,08,468
28	1840-41	1,94,62,900	1,66,31,802
29	1841-42	1,72,39,235	1,83,67,092
30	1842-43	1,04,78,655	1,35,04,050
31	1843-44	2,43,35,718	1,70,46,748
32	1844-45	2,41,59,787	1,22,96,921
33	1845-46	1,74,32,684	91,13,083
34	1846-47	1,52,03,284	1,38,21,112
35	1847-48	1,35,88,885	1,19,58,635
36	1848-49	1,59,93,613	1,24,31,118
37	1849-50	2,72,12,042	1,87,14,178
38	1850-51	2,86,60,093	2,40,65,570
39	1851-52	2,68,45,980	1,64,76,770
40	1852-53	2,93,19,750	2,93,85,955
41	1853-54	3,16,15,301	2,65,54,827
42	1854-55	3,25,34,539	2,39,54,125
43	1855-56	3,19,53,124	3,41,37,807
44	1856-57	3,74,41,910	4,43,04,909
45	1857-58	4,33,36,397	4,42,20,746
46	1858-59	6,19,85,914	4,84,65,442

III. Kurrachee.

965 vessels (square rigged and native craft) with an aggregate tonnage of 73,167 arrived during 1858-59; and 735, with a tonnage of 59,637 departed.

The value of the Imports was Rs. 25,69,857, of the Exports 20,62,326, and of the re-Exports Rs. 1,77,554.

IV. General and Miscellaneous.

During the year the rate for homeward cargoes was ruinously low. The cotton trader, however, while thus enjoying the benefits of cheap freight, in conveying his Cotton from Bombay to England, was oppressed with heavy charges on account of freight from the continental ports to the Port of Bombay. The cost of conveying Cotton in country boats over a space not exceeding 300 miles, and landing it at Bombay, was in many cases much more than the cost for conveying the same cotton all the way from Bombay to England.

The most remarkable occurrence which took place in the year under review was the introduction of a new Customs Law (dated 14th March 1859, Act VII. of 1859), the chief features of which were :—

1*st.*—The abolition of differential duty on origin, and thus admitting foreign produce and manufactures on the same terms as those of the United Kingdom or any British Possession.

2*nd.*—The imposition of a 20 per cent. duty on luxuries.

3*rd.*—The imposition of a 10 per cent. duty on almost every other article, with the exception of Cotton Twist, upon which the duty was fixed at 5 per cent., instead of the former rate of 3½ on British, and 7 per cent. on Foreign.

The financial effect of the new law from the 14th March to the 30th April 1859, say for one month and a half or one-eighth of the year, was an *increase* of realizations, over and above what would have been collected under the old rates, of Rupees 3,89,757-12-1.

The opening of the Railway to the bottom of the Bore Ghaut had no appreciable effect on the port of Panwell. Nor did the Railway induce many salt traders to send their Salt by Rail. But when the Bore Ghaut is opened, they will probably take advantage of it. The Port of Bombay needs the following :—

1*st.*—Enlarged Custom House premises.

2*nd.*—Extended Wharfage, and also Quay accommodation with covered sheds.

3*rd.*—Warehouses on a very large scale.

4*th.* Improved description of Cargo Boats.

5th.—Improved system of landing Cargo, so that it may be landed at fair and moderate rates, and without the great delays and obstacles which at present exist.

6th. Docks for Ships requiring repairs, or requiring to be examined and overhauled. At present there are only the Government Docks and the P. and O. Company's Docks and these are frequently not available for the use of merchant ships.

MEMOIR ON THE RUINS OF BABYLON.

Bombay Records No. LI.—*New Series.*—On the 5th March 1859 Commander W. B. Selby of the Indian Navy, Surveyor in Mesopotamia, forwards to the Bombay Government a Memoir on the Ruins of Babylon with two Plans. He confines himself strictly to a delineation of the face of the country as it now presents itself.

There is a doubt as to whether the spot described is the veritable site of the Babylon of Scripture. If these are indeed the remains of Great Babylon, some traces, would yet remain of the immense walls, 300 feet high and 60 thick, which, according to Herodotus, encircled the city for an extent of about 25 miles square, and yet no vestige of them has been discovered. The banks of canals, of an antiquity that we can form no idea of [save that in the year B. C. 2217 they are first mentioned (Genesis x. 25)], exist in every direction, and show, as some of them do near Al Heimar, in their disjointed state, how very many cycles must have passed ere constructions like these, broad at the base and narrow at the top, could have assumed the form—a ridge of conical hills—they now present. These cannot have been of a much greater size than they now are. The more modern ones never exceed 35 feet in height. As the bank of canals still exist in fair preservation the inference is that some vestige of the walls described by Herodotus should be found. But none is: and a mass of shapeless detached ruin, in all 6,000 yards long by 3,100 broad, is all that remains of a city occupying an area of 25 miles square.

Again, we do not find in the face of the country, as it is presented among these ruins, any similarity to the doom foretold of Babylon, in Isaiah xiii., 20th to 22nd verses. The river has not much altered its course since it originally ran through the city. Its ancient course is S. S. W. 1500 yards from the Mujelibé. On the contrary, gardens and cultivation extend in places to the very edge and among the ruins, and in the spring

the country is covered with flocks of cattle grazing in every direction; nor are there more wild animals than in any other part of the counry. Upon the very edge of the ancient west bank of the river are mounds of the same construction as those in the same line on the east. In the lapse of ages the river, having a natural tendency to the S. E., has gradually encroached on that side, but, meeting greater solidity in the mounds of ruins than in the alluvial soil, has again been diverted to the westward. Passing on to the southward of the ruins it again encroaches to the eastward, and the well-defined line of the ancient western bank of the river shows, certainly, where the river anciently ran.

Again, the two sides of the large oblong ruin called "Annana," extending 1750 yards in a N. N. W. and S. S. E. direction, are also on *the very edge* of the old bank; and a careful inspection of the plan would enable us, with very few additions, to complete a rampart of this breadth and 2,900 yards long, which would include all but the Kasr and Mujelibé. According to tradition the river, then called Nil ran through the country a little East of the main ruins. N. N. W., 1,100 yards from the Mujelibé, and running in the direction which is assigned to the supposed course of ancient Nil, is a ridge of small pebbles from 8 to 15 yards wide, and elevated about 8 feet above the surface. But there is no other soil of this description nearer than 25 miles north.

There are two very ancient ruins whose use or structure cannot be decided upon. East, from north end of Mujelibé and distant 650 yards, is a broad way of nearly uniform breadth of about 100 yards, and elevated about 18 inches to 2 feet through its entire length, extending a distance of 3,700 yards, where it abruptly terminates in a marsh. It is quite barren, and bears the appearance of having been a broad roadway. At the western end it is slightly depressed in the centre. Just to south of outer rampart, and extending 7,500 yards in its entire length, and running in a curved line to E. 20° N., is another exactly similar, save that nearly along its whole course it is of that nitrous soil which marks where ruins are, and so soft that one sinks to the ankles in walking over it. In one part of it it widens out into a circle with four similar ways diverging from it. One of these was traced to a very ancient branch of the Nil canal where it assumed the appearance of a canal. There is another, less in length, of a more firm soil, and running in a different direction. The object of Commander Selby was to complete a plan of the supposed ruins of Babylon and not a map of the country. When the whole of the adjacent country is surveyed with greater closeness of detail an idea will be formed of the vast

extent of ruins which cover the whole expanse of country between Baghdad and Hillah.

SIR JOHN LAWRENCE, BRIGADIER GENERAL CHAMBERLAIN, AND COLONEL EDWARDES ON THE REORGANIZATION OF THE INDIAN ARMY.

Parliamentary Papers, Supplementary to the Report of the Army Commission.

The number of European troops serving in the Punjab in June 1858 was 13,555. The number of armed native troops was 52,446, and of unarmed about 12,000. The following shews the number and distribution of European and native troops considered necessary for the Punjab territories:—

PROPOSED DISTRIBUTION OF EUROPEAN TROOPS IN THE PUNJAB AND DELHI TERRITORIES.

Station.	Engineers.	Artillery.		Cavalry.	Infantry.	Total.
		Troops or Batteries.	Foot Reserved Companies.			
Peshawur ...	...	...	1	...	200	300
Nowshera ...	...	2	...	150	1,300	1,650
Fort of Attock...	...	...	0½	...	150	200
Campbellpoor ...	...	2	1½	850	2,350	3,550
Rawul Pindee ...	1 comp. Sappers.	2	...	...	2,000	2,300
Jhelum ...	...	1	1	...	1,000	1,200
Sealkote ...	...	1	...	500	1,000	1,600
Lahore ...	...	1½	1	500	2,000	2,750
Mooltan ...	...	1	1	...	1,000	1,200
Derah Ishmail Khan ...	...	...	1	...	...	100
Umritsir ...	...	0½	1	...	1,000	1,150
Jullundhur and Kangra ...	...	1	1	...	1,000	1,200
Ferozepoor ...	...	1	2	...	2,000	2,300
Umballa ...	1	2	...	500	1,000	1,800
Kussowlie, Dugshaie, Soobathoo ...	...	...	...	...	...	...
Delhi	...	2	1	...	1,000	1,300
Total	2	17	12	2,500	17,000	22,600

PROPOSED DISTRIBUTION OF NATIVE TROOPS IN THE PUNJAB AND DELHI TERRITORIES.

Station.		Artillery.		Cavalry.		Infantry.		Total.
		Troops or Batteries.	Foot.	Irregular.	Police Horse.	Punjab Regiments.	Police Battalions.	
Peshawur ...	1 comp. pioneers.	2	...	850	600	2,250	900	4,900
Nowshera ..	...	..	120 Mount. train, 8 guns.	150	...	450	...	720
Forts of Western Border ...	...	...	...	..	...	1,800	...	1,800
Yoosufzye and Hushtnuggur	...	...	...	400 guides.	...	824	...	1,224
Fort of Attock	...	...	...	...	...	160	...	160
Campbellpoor	...	...	...	150	...	740	...	890
Hazara ...	...	...	70 Mountain train.	...	150	1,800	100	2,120
Rawul Pindee	...	...	...	350	400	900	900	2,550
Jhelum ...	...	...	...	...	..	900	...	900
Kohat ...	1 comp. pioneers.	1	5	200	300	1,800	900	3,450
Bunnoo ...	...	1	25	300	300	1,800	...	2,525
Derah Ishmail Khan ...	...	1	25	500	200	900	900	2,625
Derah Ghazee Khan ...	...	½	..	500	300	900	...	1,750
Asun ...	...	...	...	500	...	...	...	500
Leiah ...	..	...	..	..	150	...	...	150
Mooltan ...	...	...	...	500	400	900	900	2,700
Googaira ...	...	...	...	..	...	900	...	900
Lahore ...	...	...	...	500	700	1,800	900	3,900
Sealkote ...	...	...	...	...	...	900	...	900
Umritsir ...	...	...	...	500	...	900	900	2,300
Jullundhur ...	...	..	...	500	100	900	...	1,500
Hoo-hyarpoor...	...	...	...	...	100	...	900	1,000
Kangra and Noorpoor ...	...	...	..	...	...	900	...	900
Phillour ...	...	...	..	...	...	900	...	900
Ferozepoor ...	...	...	..	500	...	900	...	1,400
Umbalia ..	...	...	...	500	400	900	900	2,700
Simla ...	...	...	...	...	..	700	...	700
Delhi ...	...	...	...	500	500	1,800	900	3,700
Goorgaon ...	...	...	...	..	...	...	900	900
Hansi and Hissar ...	...	...	..	...	800	...	900	1,700
Totals	2 comps.	5½	290	7,400	5,400	27,621	10,900	52,361

None of these should be Regulars. The ratio of European to native troops is thus as 3 to 7 inclusive of police, or exclusive as 5 to 8. On the side of the Europeans are ranged 102 field pieces of artillery against 22 on the side of the natives. Additional barrack accommodation would be required for 12,131 Europeans by this scheme. In drawing up the present proposal, while on the one hand due weight has been given to considerations of finance, and on the other a full share of employment has been provided for the military classes of our subjects, the whole system of military occupation in the Punjab has been so remodelled as to place that important frontier province of our Indian Empire thoroughly within the grasp of our own countrymen.

There should be no station of India without a "keep" of some kind to which non-combatants could retreat on an emergency. Keeps will be required in the Punjab at—

Nowshera,	Meean Meer,
Campbellpoor,	Mooltan Cantonment,
Rawul Pindee,	Jullundhur,
Sealkote,	Umballa,

Wherever, in fact, there is not a fort.

Frontier mountain warfare necessitates a small battery of *Native* Artillery. As a matter of cheapness native drivers and gun lascars should be retained with all the European Artillery of the local army. The conduct of these men at Delhi was admirable. The main line of communication from Kurnaul to Attock must be completed. There should be good steamers on the Punjab rivers.

Bengal Presidency.—The subjoined table shews the number and distribution of European troops considered necessary by the Punjab Committee in Bengal :—

Civil Government.	Distribution.			Total.	
	Division of the Army.	Station.	Number.	Of each Division.	Of each Government.
Bengal. ...	Presidency ...	Calcutta ...	2,000		
		Dum-Dum	1,000		
		Dacca ...	1,000		
		Arracan ...	1,000		
				5,000	
	Pegu ...	... ...	2,000		
				2,000	
	Dinapoor	Dinapoor...	2,000		
			1,000		
				3,000	
					10,000
N. W. Provinces.	Benares	Benares ...	2,000		
		Saugor ...	1,000		
		Jubbulpoor	1,000		
		Ghazeepoor	1,000		
				5,000	
	Cawnpoor	Cawnpoor	2,000		
		Allahabad	2,000		
		Bundlecund	1,000		
				5,000	
	Meerut...	Agra ...	2,000		
		Rohilcund	2,000		
		Meerut ...	3,000		
				7,000	
					17,000
Supreme Government.	Central India	Neemuch...	5,000	5,000	
		Mhow ...			
		Ajmere ...			
					5,000
Punjab. ...	Sirhind Lahore... Peshawur	Details given in answer to former questions			22,600
		Grand Total			45,6

European troops should not be frittered away but centralized 1st with reference to political requirements 2nd, to the healthiest places within those political circles. Native soldiers should be as five to two in the following proportions:

European soldiers	2
Native infantry	3
Police	2
Total	7

The result would be as follows:—

Government.	Europeans.	Natives.	Total.
Bengal	10,000	25,000	35,000
North-West Provinces	17,000	42,500	59,500
Central India ...	5,000	12,500	17,500
Punjab	22,600	56,550	79,150
Bengal Presidency	54,600	136,500	191,100

In proportioning natives to Europeans the difference in part of warlike and robust strength among the races should be remembered. The proportions between the Line and Local Armies are shewn:—

Branch.	Line.	Locals.
Artillery	¼	¾
Cavalry	¼	¾
Infantry	½	½
Sappers and Miners	None.	All.

Any new regiments of Europeans should be officered from the officers of the old Native Army, should be thrown into a general Cavalry and general Infantry list, those who are inefficient should be allowed to retire on the pension of their rank and the really efficient posted according to seniority.

In their Answers to the Questions on the recruiting and composition of Corps with reference to the whole Bengal Native Army, the Punjab Committee urge the duty and wisdom of bringing as many Eurasians, Native Christians and aboriginal races as possible into the service. The Christians should be in separate corps with an ordained Pastor, European or Native, for each. Some corps should be homogeneous, but most should be mixed of the races prevailing in the respective provinces. Regiments of Native Infantry should be provincial.

The native infantry should be armed with a light musket and bayonet but never with the Enfield; the police with a percussion carbine and sword. They should be dressed in a loose tunic, with open throat, no stock; a good thick turban that will ward off sun, or cold, or blows, and loose pantaloons without a single button, fastening round the waist by a string. Europeans and natives should not be combined in close and permanent association. The powers of a commanding officer should include the right of dismissal, of imprisonment for two months with loss of pay, of flogging to the extent of 30 lashes and of fine to the extent of one month's pay a year. All grave crimes should be tried by a district Court Martial with power to transport for 14 years, native officers should be promoted for merit and efficiency only, no army can be kept in working order without an "unemployed list," to which inefficient officers at any stage of their career may be transferred, both from the staff and from the line. The term of an officer's continuance in the service, should be limited to 35 years, unless invited to serve longer. Present incumbents should get five years' notice, but a premium of increased pension be offered to them to go at once, say 100*l.* to a colonel, and lieutenant-colonels and majors in proportion. Above all efficient Brigadiers and Generals of Division should be selected. To train officers for native corps, every cadet should first serve with a European regiment for two years. On passing in Hindostanee he should study for two years at the military college, return to his regiment, do duty for one year on probation and then be either permanently appointed or transferred to some other department according to circumstances.

It was not the paucity of officers but the bad system which ruined regiments. To meet the demand of the Staff General Jacob's plan of a general gradation list for each Presidency should

the officers borne on it who may hold no special appointments, will reside in India at such places as Government may direct, but will have no public functions to perform. The officers of artillery and of engineers each to be borne in a separate list up to the rank of Colonel inclusive; and thereafter to be incorporated in the *general list of the whole army*. The Senior Colonel of artillery or engineers, when senior in the army, being promoted to Major-general as vacancies may occur. Rank in this list to be the only permanent rank; all regimental and other rank being temporary only, and to continue only so long as officers may be serving with regiments, or be otherwise employed in a military capacity. In case of officers being promoted for good service, &c. by the Queen, they are to take their places in the general gradation list according to the dates of their promotions, and are to enjoy every advantage exactly as if they had risen to such places by seniority only. Officers promoted by substantive brevet should be in excess of the ordinary strength. There should be two rates of pay, one for unemployed and one for employed officers. Officers thoroughly inefficient, who yet cannot be brought under the lash of a court martial should receive 'subsistence' allowance, or half that of the 'unemployed' rates. The general status of Military Surgeons should be raised. The present table of precedence between civil and military servants should be altered according to the post held by an officer, covenanted or uncovenanted, and not his standing on the service The Punjab Committee thus sum up the advantages of their system. The general gradation list secures that degree of conservatism and equal promotion which must ever be popular with the majority of any service. The principle of selection for employment secures for Government the abilities of its best servants in the most important posts, and throws open the highest offices to emulation, industry, and ambition, while the three gradations of pay enable Government to deal effectively with delinquents, without absolutely ruining them, and will thereby carry public opinion along with such decisions. The junior and senior military colleges ensure the means of obtaining a sound professional education to every officer who desires to acquire it. The modified system of brevet, while increasing the inducements to render gallant service, provides a check upon the abuse of the prerogative, and diminishes the risk of unjust supercession. On the whole, a scientific and effective staff will be produced, without depriving the line of its officers, or the officers of hope. They conclude that to draw recruits to the army the status of the soldier must be put on a footing more consonant with the advancing civilization of the English people. As far as possible all restrictions on

the number of married soldiers in a regiment should be withdrawn. At present only 6 wives are allowed in a company of 100 in England and 12 in India. At the close of their service the married soldiers might be settled in the veteran battalions holding hill forts and stations. Spirit drinking should be decreased by the direct influence of the officers, by cheapening beer and porter, and by stopping the 'dram' system on board ship.

As to Chaplains instead of there being only one long-delayed step in the chaplain's service, there should be three at shorter intervals, as follows:—

	Monthly.
Assistant chaplains, on appointment, and for the first 4 years	500 Rs.
After 4 years, and up to 7 years	600 „
After 7 years, and up to 10 years	700 „
After 10 years	800 „

The number must be increased, and where there are two in a station one should be junior. The supervising machinery of one Bishop and one Archdeacon is insufficient, there is no branch of the Indian service in which the principle of careful and conscientious selection is more imperatively required than in the appointment of chaplains. The influence for good which a really earnest clergyman can effect in an Indian cantonment is hardly to be over-estimated.

H. B. E. FRERE, ESQ., COMMISSIONER IN SIND, ON THE REORGANIZATION OF THE INDIAN ARMY.

The most obvious divisions of India for military purposes would be one which gave the valley of the Ganges and its tributaries to one army with its base at Calcutta; the valley of the Indus, with its tributaries, to another army with its base at Kurrachee; the western coast, from the Gulf of Cutch to Mangalore, including Rajpootana, Malwa, the Deccan, Bedur, and Berar, to a third army with its base at Bombay; Southern India and the Coromandel coast to a fourth army, having its head-quarters at Madras, Ceylon, Burmah; and the Straits Settlements to a fifth army with its head-quarters at Rangoon or Point de Galle. The Bombay division would thus be large, with an important frontier and seaboard, and require a fourth of the entire army. If the finances allowed an army of 200,000 men 50,000 would thus be assigned to Bombay. It is impossible to fix the ratio of Europeans to natives in all circumstances and arms. But as an average it should be, as Sir Charles Napier also thought, 3 to 1. In the Artillery

almost all should be Europeans, in the Cavalry few. Thus in Bombay 12,500 should be Europeans :—

Artillery	...	...	...	3,500
Cavalry	...	...	...	500
Infantry	...	...	...	8,500
				12,500

Who might be thus distributed (the numbers given are merely roughly proportionate approximations) :—

——	Artillery.	Cavalry.	Infantry.
Bombay ... Poona ... Kirkee ... Ahmednuggur	1,000	500	3,000
Belgaum	500	...	1,000
Sholapoor	100	...	...
Maligaum	100	...	...
Mhow	300	...	1,000
Neemuch	100	...	...
Nusseerabad	100	...	...
Deesa ... Ahmedabad ...	500	...	1,000
Baroda	100	...	...
Kurrachee	500	...	2,000
Aden	200	...	500
	3,500	500	8,500

The same proportions would hold good whatever the size of the army we could afford, whether 100,000 or 200,000. If we had the money to pay them I should not consider India sufficiently provided till we could assemble 30,000 men, half of them Europeans, at any given point in the interior, at two months' notice, and 60,000 within three months, and at half that notice at any spot on the frontier or seaboard, without denuding any single station of troops. But this is in a great measure a question of facilities for movements rather than of numbers, and requires the completion of a good system of rail and steam communication and telegraph. The native army must also be regulated according to the finances, but it would be large enough when from the peace establishment we could

assemble 30,000 men in equal proportions of natives and Europeans, at two months' notice, and 60,000 in three months at any given point of the interior, and at half that notice at any spot on the coast or frontier.

I would assign a fourth of the whole army to Bombay, and three-fourths (¾ths) of the Bombay army should be natives. If we could pay an army of 200,000 men in India, 50,000 would be the proportion for Bombay, of whom 37,500 would be natives in the following proportions :—

Artillery	...	700
Sappers	...	500
Cavalry	...	7,500 (say 10 Regts. of 750 each)
Infantry	...	28,800 (say 36 Regts. of 800 each)
Total	...	37,500*

who might be thus distributed in time of peace.

	Artillery.	Sappers.	Cavalry.		Infantry.	
			Men.	Regiments.	Men.	Regiments.
Bombay*						
Poona (Seroor for the Cavalry)*	200	250	750	1	6,400	8
Nuggur*						
Belgaum (Kuladgee for the Cavalry)* ...	...	...	750	1	1,600	2
Sholapoor*	...	...	750	1	1,600	2
Maligaum*	...	...	...	...	1,600	2
Asseerghur	...	...	...	...	800	1
Mhow*	...	...	750	1	2,400	3
Neemuch*	...	...	...	...	1,600	2
Nusseerabad	...	...	750	1	1,600	3
Deesa ...	100	...	1,500	2	3,200	4
Ahmedabad ...						
Baroda*	...	...	...	...	1,600	2
Kurrachee*	...	250	...	...	3,200	4
Jacobabad*	300	...	2,250	3	1,600	2
Aden	100	...	...	...	1,600	2
	700	500	7,500	10	28,800	36

The stations marked* are those which I should consider depôts whence in time of war, a force of six regiments of cavalry and sixteen of infantry could be drawn. The European troops, like every other branch of the army in India, should be a portion of Her Majesty's regular army, and the European portion should be available for service in every part of the British empire. Every regiment in the army should have permanent head quarters, either in the United Kingdom, in India, or the colonies. The ordinary European garrison of India should all have the permanent head-quarters of the corps composing it in India, and should not leave India except on extraordinary emergencies; and in like emergencies in India, regiments of the army, whose permanent head-quarters were in the United Kingdom or colonies, might temporarily reinforce the garrison of India. Any new European regiments should be officered with officers who have not served long enough with regular native regiments to get their habits of life fixed.

Sepoys on enlistment should not take an oath but a pledge. Native Corps should be recruited over a wide area without reference to districts. They should not be homogeneous as to race, tribe or caste. The police and the Military Corps should be kept distinct. Companies of Europeans should not form a component part of native regiments, nor should native irregular regiments be attached to European local regiments and officered from them. The Bombay native officers are excellent as a rule, and should be continued as at present, but they should be differently treated. No pensions should be given as a matter of right. All such individual peculiarities as indicate individual character should be encouraged in the armies of the three Presidencies. The authority of the immediate commanding officer should be made supreme over all natives placed under his orders.

As to Sind the duties of troops would consist of—

1. Garrisoning Kurrachee, which is the key of the Indus, and a seaport of remarkable salubrity, where troops can be embarked and disembarked at all times of the year, and where they are admirably placed for movement up the Indus, and in any direction by sea. It must be in a few years one of our principal arsenals, and greatest military stations in India.

2ndly. Keeping open the communication up the line of the Indus with Mooltan and the Punjab.

3rdly. Observing the Bolan Pass, one of the two great highways from the West into India.

It is only the first of these duties which should be assigned to Europeans as an ordinary part of our system, owing to the extreme heat in Central and Upper Sind. It would usually be found convenient to keep at least one-fifth of the whole force of

European infantry and artillery of the Bombay army at Kurrachee, and if our finances allowed of our keeping more than 10,000 Europeans in the Bombay army, the excess could not be better posted than at Kurrachee.

For provincial purposes only native police are required in Sind, but a frontier field force, as recommended by Brigadier General Jacob should be posted where they will command the Bolan Pass. The Sind police was the first body of the kind organized in India, on a system devised by Sir Charles Napier, under the orders of Lord Ellenborough. They are divided into—

1. "Rural police."—A body of drilled infantry, whose functions are purely protective. They guard prisoners, gaols, and treasuries, and wherever permanent guards are required. They were originally entirely Hindostan and Deccan men, Sir C. Napier holding that, in a newly conquered country, a large proportion of the protective police should be foreigners. It was also found at first difficult to get Sindees and Beloochees to submit to the uniform and drill, but of late years many of them have been enlisted.

2. "Mounted police"—a body of police horse, some of them armed and equipped like the irregular cavalry. There are many Hindostan men in the ranks, but the majority are natives of Sind, Beloochistan, and Affghanistan. Their functions are partly protective and partly detective. A portion of the mounted police in each collectorate are Beloochees of various frontier tribes, dressed in their national costume and riding Belooch mares; and a few of them, who are employed in the sandy portions of the desert, ride camels.

3. "City police."—A small proportion of these men are ordinary nujeebs and burkundauze for protective police purposes in towns, but most of them are trackers and detectives, and, with very few exceptions, natives of Sind.

In a letter to Colonel Durand, Mr. Frere urges that the question of the reorganisation of the army is in India one of Finance. To effect it a dictator is wanted. We must centralise by persons and not, as at present, by departments, and especially so in the army.

He thus recapitulates his suggestions:

1. The question of organizing the army is essentially a financial question, and the first question must be, not what army we could desire? but what is the best army we can afford?

2. Reorganization of an army is not a work which can be executed by a commission. The labours of any commission should be confined to inquiry, and report on defects and causes of disaster.

3. The task of reorganizing the army must be intrusted to

individual officers acting with local governments, each independent in its sphere of territory, and within certain limits as to total expenditure, and only generally accountable to the supreme government.

4. A system of centralization by persons, each despotic in his own sphere, must be substituted for our present system of centralization by separate and independent departments.

5. The present task of reorganization should be more immediately confined to replacing that portion of the army which has fallen away.

6. The reorganization of the army must be kept quite distinct from that of the police.

7. The civil government, endued with more autocratic powers and stricter responsibilities than at present, must undertake so to govern as to require no further aid or protection in ordinary times against internal disaffection or rebellion than can be furnished by the police, and must itself undertake the reform of that police where necessary.

8. The army of India should be divided into five distinct bodies, each under a separate Commander-in-Chief, viz :—

1st. The army of the valley of the Ganges, with its base at Calcutta.

2nd. The army of the valley of the Indus, with its base at Kurrachee.

3rd. The army of the west coast, with its base at Bombay.

4th. The army of the east coast, with its base at Madras.

5th. The army of Burmah, the Straits, and Ceylon.

The whole under a Commander-in-Chief in India.

9. The boundaries of the civil governments to be readjusted so as to correspond with the divisions, each of which is occupied by a separate army.

10. For the present we may restrict any attempt at entire reorganization to the armies occupying the valleys of the Ganges and the Indus.

11. The governments of Bombay and Madras will be charged with the duty of garrisoning definite portions of the Peninsula, with full power to modify the stations and constitution of their armies, under the general control of the Governor-General and the Commander-in-Chief in India, within certain limits of annual expense for regular charges, and with the obligation to seek periodical sanction for extraordinary war charges, and to keep a certain force always available for general duty beyond the limit of the Presidency.

12. These governments should also be empowered to reform their police, on the principles first adopted by Sir Charles Napier in Sind, so as to relieve the army of all civil duties, and to

provide against all contingencies, save external aggression or organized rebellion.

The Commander-in-Chief in India to be absolved from all detailed command of any one army, and to aid the Governor-General in exercising an efficient general control over the whole military strength of India.

14. The relation of local governments and the Commander-in-Chief to the Governor-General to be the same as in practice 50 years ago.

15. The total military expenditure to be considered as a whole, and divided to each army according to the work to be done, without any reference to the revenue of the Presidency to the occupation of which the army is allotted.

16. The police to be a local charge, and its strength to have some reference to what is paid by the persons and property protected.

17. Succession to active command by seniority to cease on reaching the rank of field officer. Veterans of unimpeached character who may be passed over on account of age and physical incapacity, consequent on length of service, to succeed by seniority to higher rates of good service pensions.

18. In the territories on the Indus and the Ganges, the local Commander-in-Chief in conjunction with the Civil Government, having discriminated accurately between what is required for military and what for police duties, should take over under his own command all the bodies employed on the former class of duties.

19. These he must then weed and organize, not by enforcing conformity to any one model, but by letting any one body of proved excellence grow and expand till it has filled up the gaps which defection may have left in our line of defence.

20. To do this, the best men who have shown they can make good soldiers of natives should be selected as generals of division, and intrusted with the task of reformation.

21. We must first get rid of what is incurably bad and dangerous; but we must not, in judging of this, trust to race as a guide.

22. Still less must the task of weeding be intrusted to distant authority. It must be left to a general, seeing, hearing, and deciding for himself on the men he commands as they come personally before him.

23. In time of peace we shall not require so large a native army as heretofore.

24. The proportion of natives to European fighting men may vary, according to our means, from that of one native to one Europ[redacted] four natives to one European.

25. In order to make smaller numbers more efficient—

1st. Our troops must be more massed than they are at present.

2d. All arsenals should be made defensible, and entrenched lines should be provided for baggage and non-combatants in every large permanent cantonment which occupies an important strategical position. But all other stations and all stations on the frontier should be held as camps of a force in the field.

3rd. The best arms procurable should be given to all soldiers, natives as well as Europeans. The police will not require them.

4th. The facilities for moving troops should be improved, and with this view the sillidar principle should be extended to all native troops.

5th Railways, roads, and steamers should be extended as much as possible.

6th. We must abandon a policy calculated to alienate native princes, and enable them to take care of themselves, and keep their own subjects in order, reducing contingents, &c.

7th. Permanent head-quarters should be established for regiments, serving at the same time as recruit and invalid depôts.

26. By these means, in the course of a few years, we ought to be able to concentrate 30,000 men, half of them Europeans, at any given point in the interior at two months' notice, 60,000 at three months' notice, and within half those periods on the frontier and seaboard, with less than this we cannot be secure in India.

27. In applying these principles to the valley of the Indus, we should begin by giving it an army and civil service as distinct from those of the rest of India as in the other Presidencies.

28. The Commander-in-Chief of such an army would have—

1st. To provide proper quarters for his European regiments at Kurrachee as the sea base of his operations, and in salubrious regions of the Sub-Himalayan ranges.

2d. In order to get a really efficient body of European officers for the native force, arrangements should be made for transferring all officers in civil employ to a local civil service, and all in civil departments of the military service to a staff corps, leaving with the native corps none but officers who serve in them from choice and as their permanent profession.

3d. In reorganizing the native army, variety of organization is not *per se* to be regarded as a reason for change,

and no attempt should be made at assimilation for the mere sake of uniformity.

29. The whole of the Indus or frontier army should be kept permanently on a war establishment.

SURVEY OPERATIONS OF THE LOWER PROVINCES.

From 1st October 1857 to 30th September 1858.

On the 29th July 1859 the Board of Revenue submit to the Government of Bengal, a resumé of the operations of the Survey for the year ending 30th September 1858.

In the 1*st Division* Mr. Pemberton aided by 6 Europeans and 31 natives surveyed the tract of country subtending both banks of the River Teesta, having Cooch Behar on the North, with Bograh and Dinagepore on the South. It comprises 1,512⅓ square miles, including 20 miles of River circuits, effected at a cost (exclusive of Rupees 883-2-7 on account of mehal-war calculations, and Rupees 1,193-2-5 incurred in the keep and feed of elephants) of Rupees 33,796-3-0, upon which sum the average cost per square mile of the surveyed area falls at the rate of Rupees 22-5-6, or Rupees 1-9-2 less than in the previous season; a result which the Deputy Surveyor General pronounces to be very satisfactory. Mr. Morris directed the non-professional operations and subsequently Mr. W. Waterfield. The area demarcated was 1,600 miles. Three hundred and sixty boundary disputes were disposed of out of a file of 479 cases, leaving 119 pending. Of 144 appeals to the Superintendent, the whole were decided within the year, the orders being reversed or modified in 8 cases, and upheld in 84; the remainder having been either remanded for further investigation or struck off the file. 4,634 villages were demarcated and 2,231 *thakbusts* made over to the Revenue Surveyors. 1,117 *izad* and *adum nishan* cases or cases relating to surplus and missing lands, were disposed of and 376 pending. There were 1815 references of the nature of *adum nishan* cases from the 4th Division, of which 981 were disposed of before the close of the year. The registers of 27 new pergunnahs were finished and 25 made over to the Collector. The number of cases instituted in the course of writing them up was:—

	Instituted.	*Disposed of.*	*Remaining.*
Rajshahee ...	71	71	0
Pubna	2,015	1,191	824
Bograh	200	196	4

to which must be added 891 cases of arrears belonging to Rungpore, the nature of which is not explained, of which 817 had been disposed of, and 74 remained on the file. The expense incurred in this branch of the operations reached the sum of Rupees 76,368-5-3¾, which gives the average of Rupees 47-11-8 per square mile on the area demarcated, being Rupees 19-1-8 more than in the past season, owing to the greater number and the smaller size of the hulkas or circuits demarcated.

In the *2nd Division* small progress was made. Captain Row with 4 European and 35 Native Surveyors took the field in December in that part of the Dinagepore District which adjoins Maldah and Rajshahee. The area surveyed did not exceed 532 square miles, which was accomplished at a cost of Rupees 30,765-6-8, exclusive of Rupees 430 expended on mehalwar calculations, producing the high average rate of Rupees 57-12-4 per square mile, or Rupees 24-15-9 above that of the previous season. The means and opportunity were both defective, and Captain Row was in a bad state of health. The Collector of Burdwan superintended the registry work of the districts. 28 boundary disputes, and 1,401 *Izad* and *Adum nishan* cases were disposed of. Of 72 appeals disposed of, the orders of the Deputy Collectors were upheld in 50, and modified in 12 cases, the remaining 10 cases being restored to the file for further investigation. The expense incurred on account of the survey branch of the Burdwan Collector's office, in connection with the registry work, amounted to Rupees 5,666-0-8.

In the *3rd Division* Mr. N. T. Davey with 6 European and 34 Native Surveyors surveyed the whole of the demarcated area of the previous season. The field of operations lay to the South of Mymensing between the Dullusceree and Lukhya Rivers, and embraced an area of 1,219 square miles containing 2,118 villages. The cost, exclusive of Rupees 830-1-6 for mehalwar calculations, and of Rupees 1,157-6-0 for the feed of elephants, amounted to Rupees 32,828-8-3, producing an average rate of Rupees 26-14-9 per square mile, or Rupees 3-10-11 beyond that of the previous season. This excess is attributed to the large hilly tract in the work of that season, which by increasing the total area, served to keep down the average of that year. The result is satisfactory. Major Thuillier animadverts on the embarrassment to the Revenue Surveyor arising from the practice of making corrections of maps long after the completion of the survey. This necessity arises from the incompleteness of the proceedings of the earlier superintendents, from the extremely defective lists of mehals and mouzahs supplied by the Collector, especially in Dacca and from the inevitable delays caused by the system of appeals in boundary dispute cases. To meet the last the

Board have authorized the Commissioner to give precedence to survey appeals by disposing of the cases without reference to their number on his file. They intend also to issue a notice that they themselves will not hear appeals unless they involve a disputed point of law or practice. Mr. Muspratt demarcated 4,694 villages and made over 2,039 *thakbusts* to the Revenue Surveyors. Owing to the value and interlacing of the lands, the boundary dispute cases amounted to the enormous number of 6,020 cases. Of these cases, 5,212 were disposed of during the year, namely, 2,689 on their merits, and 947 by arbitration or compromise; 1,576 being struck off for non-payment of Ameen's fees. Of 806 appeals disposed of, 662 related to boundary disputes, and of these in 387 the orders were upheld; in 46 they were reversed or modified; and 36 cases were returned for further investigation, 193 being struck off. The remaining 144 appeals related to miscellaneous cases, of which the orders in 99 cases were upheld, in 12 reversed or modified, 6 being returned for re-investigation, and 24 struck off. Owing to the imperfect character of the Collectorate lists, there were 6,357 *Izad* and *adum nishan* cases, of which 4,696 were disposed of and 1,019 were pending. The intermixture of Pergunnahs in Dacca is so great that the registry cannot be fairly commenced till the entire district is surveyed. In the 108 Pergunnahs and 63 Tuppehs which have come under demarcation during the past two years, the lands of seven other Districts besides Dacca were met with, a fact which shows the interlacing of lands to be beyond all conception intricate and perplexing. The Collector attended to the registry work of Mymensing. The expense incurred during the year aggregated Rupees 65,785-10-7, upon which the demarcated area of 1,100 square miles falls at the rate of Rupees 59-12-1 per square mile, being Rupees 18-5-0 more than in the previous season. This is ascribed to the greater intermixture of property met with during the operations of the year under review.

Captain Gastrell with 6 European and 33 Native Surveyors, in the *4th Division*, took up the survey of the Southern portion of Jessore with the adjoining Sunderbun lots. The survey embraced all the Southern Pergunnahs between the Cobaduck River on the West, and the Mudhomuttee and Pangoochee on the East, and extended to the great Sunderbuns jungle on the South, including numerous grants and allotments. A portion of the Backergunge district to the West of the Balessur River was likewise commenced upon. By the beginning of June, an area of 1,048 square miles, containing 1,313 villages, was accomplished at a cost (exclusive of Rupees 644-8-3 expended on mehalwar calculations, and Rupees 1,189 on the feed of ele-

phants and other contingencies) of Rupees 35,866-10-9, giving an average rate of Rupees 33-11-10 per square mile, or Rupees 11-10-9 more than in the previous season, owing to the greater intricacy of the work, which lay amidst swamps and endless ramifications of tidal creeks. The work is specially commended. The area demarcated was about 850 square miles, comprised in 1,203 villages, which with 470 square miles unsurveyed of the previous season's demarcations, formed a sufficiently large field for the Revenue Surveyor. The boundary dispute cases and cases relating to excess and missing lands in this Division were not numerous. Of 259 appeals decided, the final orders in 64 were upheld, and in 9 reversed or modified; 27 cases were sent back for re-investigation, and 159 struck off. Nine new Registers of Moorshedabad had been forwarded to the Collector, leaving 13 to complete that district. The expense incurred aggregated Rupees 66,798-11-0, on which the small area demarcated produces the unusually high average of Rs. 78-9-4 per square mile. This is attributed to the difficult nature of the country traversed, consisting of swamps and low lands intersected with numerous tidal creeks.

In the *5th or Arracan Division* Mr. O'Donel with 4 assistants, and 29 Native Surveyors, surveyed 1,452¾ square miles, including 39 square miles of River circuits. Only 88¼ square miles of this area consisted of cultivated land, the rest being hill and jungle. The tract surveyed lay to the North of the work of the previous season as far as Sugar Loaf Hill adjoining the Chittagong District, and to the East of the Koladyne River as far as the Lemroo River. The former portion is mountainous, and the latter low land. The expense incurred was Rupees 27,471-3-9, yielding an average rate of Rupees 18-14-7 per square mile, or Rupees 5-5-3 less than in the previous season. The work was all that can be desired. The demarcations in this Division are under the superintendence of the Surveyor who conducts them simultaneously with the professional operations. During the year 24 kookships or circles were demarcated, together with portions of 9 others and 5 grants. Of the entire area demarcated and surveyed, 428 square miles consist of low land, near the old town of Arracan, and 1024 square miles of difficult hilly ground bordering for 74 miles on the Chittagong District. About 60 miles of the frontier still remain to be surveyed. The expense of this branch during the year amounted to Rupees 8,251-6-4. The Registers were brought up and lodged in the Principal Assistant Commissioner's office; 152 of these Registers were completed during the year.

The following exhibits the work done and the expense incurred in both branches in the past two years. The cost of mehal-

war calculations is included in the expenses of the professional branch :—

Divisions.	Years.	Professional.			Non-Professional.		
		Area in square mile.	Cost.	Rate per square mile.	Area in square mile.	Cost.	Rate per square mile.
1st ...	1856-57 ...	1480¾	Rs. 36,272	Rs. 24 7 10	2400	Rs. 68,635	Rs. 28 10 0
	1857-58 ...	1512⅛	„ 34,679	„ 22 14 10	1600	„ 76,368	„ 47 11 8
	Difference	+ 31½	— 1,593	— 1 9 0	— 800	+ 7,703	+ 19 1 8
2nd ...	1856-57 ...	1097¾	Rs. 37,099	Rs. 33 12 7	1000	Rs. 45,166	Rs. 34 3 5
	1857-58 ...	532½	„ 31,225	„ 58 10 1	0	„ 5,666	„ 0 0 0
	Difference	— 565¼	— 5,874	+ 24 13 6	0	0	0 0 0
3rd ...	1856-57 ...	1491⅛	Rs. 35,527	Rs. 23 13 1	1596	Rs. 66,143	Rs. 41 7 1
	1857-58 ...	1219½	„ 33,658	„ 27 9 7	1100	„ 65,785	„ 59 12 1
	Difference	— 271⅝	— 1,869	+ 3 12 6	— 496	— 358	+ 18 5 0
4th ...	1856-57 ...	1668⅝	Rs. 37,516	Rs. 22 7 8	1100	Rs. 67,549	Rs. 61 6 6
	1857-58 ...	1048⅛	„ 36,011	„ 34 5 8	850	„ 66,708	„ 78 9 4
	Difference	— 620⅛	— 1,505	+ 11 14 0	— 250	— 751	+ 17 2 10
5th ...	1856-57 ...	1227⅜	Rs. 29,768	Rs. 24 3 10	0	Rs. 4,850	0 0 0
	1857-58 ...	1452⅝	„ 27,471	„ 18 14 7	0	„ 6,251	0 0 0
	Difference	+ 225	— 2,297	— 5 5 3	0	+ 1,401	0 0 0

Combining the professional results with the non-professional the total expense incurred in the survey of the completed district in the lower provinces from the commencement of operations

in 1834 35 to 30th September 1857, for an area of 95,340 square miles was :—

Expense of professional branch, ...	Rs.	24,77,800-14-9
Khusreh expense under former system,	„	3,18,019-4-10
Expense of non-professional branch to 1855-56, ...	„	21,05,517-12-2
Total		49,01,337-15-9

or nearly half a million sterling, the general average rate per square mile being Rupees 51-6-6, or about Rupees 8 for every 100 acres demarcated and surveyed. Major Thuillier estimates the 9 Districts under survey and remaining for survey to contain 27,000 square miles, and the cost of the survey to be about 7 lakhs. At the rate of Rupees 51-6-6 per square mile, the probable cost of both branches will be about 14 lakhs. The Chota Nagpore Division or South West Frontier Agency is not comprised in this estimate. The extent of this tract is estimated at 37,000 square miles, which, as the survey will be almost wholly topographical, Major Thuillier thinks may be completed for about Rupees 10 a mile. The Arracan Province is also beside the estimate. The report concludes with an analysis of replies to questions calling for a statement of the causes of arrears in the registry work in all the divisions. In the opinion of the Board the two causes are first incorrect Collectory lists. If these lists are not correct, the Superintendent is liable to be misled. It is only in so far as they *are* correct, that he is able properly to assign Mehals to Mouzahs and *vice versa*. The next great obstacle is the intermixture of lands. If the lands of one Pergunnah are commingled with those of another, the registry must of necessity be in abeyance till the survey of all the conterminous Pergunnahs is completed. If again some of the frontier Pergunnahs have lands in the adjoining Districts, the registry must wait still further till the survey of both Districts is completed. In a report dated 2nd April 1859 Major Thuillier, the Deputy Surveyor General submits the annual reports and returns for season 1857-58, in which the above report of the Revenue Board is based. The Revenue Survey operations embraced an area of 5,675 square miles in the 5 divisions of Rungpore, Dinagepore, Dacca, Jessore and Akyab. Of these only Jessore was completed. This out-turn by the same parties of nearly the same strength as before, is less by 1,200 square miles than that of the preceding season, the causes of which, to be found in the 2nd and 4th Divisions, are fully explained; but the results effected average 1,153 square miles to each Division, 39 blocks or main circuits containing 5,949 Village circuits or Hulkas as separately demarcated by the Civil Department, have been accurately

laid down and minutely mapped in detail. The number of Pergunnahs or separate portions of Pergunnahs interspersed in the wildest confusion over each Surveyor's field of operations, cannot be recorded, for in some Districts, nearly every Village bears the name of a different Pergunnah. The outlay incurred for this work, amounts to one lakh sixty-three thousand and forty-five Rupees, twelve annas and nine pie (1,63,045-12-9,) which yields a general average rate of Rupees 28-11-8 per square mile, and Rupees 23-0-5 per Village circuit, excluding the Return from Arracan, which survey for the most part consisting of tracts of hills and dense jungle, cannot fairly affect his latter average. These general results are thus derived, and the following Table gives a comparison with the out-turn of the previous season, as detailed in the last Report.

Number of Divisions.	Names of Superintending Officers.	Pergunnahs or Main Circuits.	Number of Hulkas or Traverse Circuits.	Average size of Traverse Circuits.	Total area Surveyed in Square Miles.	Total Cost.			Average rate per Square Mile.			Average rate per Traverse Circuit.		
						Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.
1st or Northern Division	J. J. Pemberton, Esq.	9	1,516	638·46	1,512·37	34,679	5	7	22	14	10	22	14	0
2nd or Southern Division	Captain W. S. Row	3	1,077	316·00	532·54	31,225	6	8	58	10	1	28	15	10
3rd or Eastern Division	N. T. Davey, Esq.	6	2,118	368·48	1,219·44	33,658	9	9	27	9	7	15	14	3
4th or Western Division	Captain J. E. Gastrell	9	1,055	635·86	1,048·18	36,011	3	0	34	5	8	34	2	1
5th or Arracan Division	J. H. O'Donel, Esq.	12	183	5,080·12	1,452·60	27,471	3	9	18	14	7	150	1	10
Total for Season 1857-58		39	5,949	620·22	5,765·14	1,63,045	12	9	28	11	8	27	6	6
Ditto Ditto 1856-57		68	6,411	695·00	6,965·69	1,76,183	1	1¼	24	12	5	26	14	10
Difference		— 29	— 462	— 74·78	— 1,200·55	— 13,137	4	4¼	+ 3	15	3	+ 0	7	8

There is a net saving of Rs. 18,262 on the maximum grants sanctioned for the five establishments. The mileage rate is nearly 4 Rs. in excess of that 1856-57, but the present Return is a very fair one, taking the past five seasons into consideration, the mean average of which is 5,388 square miles effected, and Rupees 27-15-2 the rate.

In mapping, the district maps were prosecuted as far as possible with the limited means at the disposal of the Deputy Surveyor. Considerable progress was made towards effecting duplicates of 32,430 village plans and 203 Pergunnah maps destroyed by the rebels. The Deputy Commissioner of the Sonthal Pergunnahs was supplied with 10 handsome volumes, containing 1,199 Village Plans of the Tuppa Suruth Deoghur of Beerbhoom District, made Non-Regulation by Act X. of 1857. The long expected new plan of Calcutta engraved in England from Mr. Simm's survey was sent out. It is on a scale of nearly 14 inches to the mile and a reduction was made to six inches to connect it with Major Smyth's plan of the suburbs, for the use of Railway Companies. To shew the principal public offices and buildings it was reduced to 3 inches for use of officers and troops landing in Calcutta. No less than 4,907 lithographed Maps and Plans of various kinds, have been issued to Officials, Civil and Military, all over the country, whilst 833 have been sold to the public, making a total of 5,740. The sum realized by their sale and by extra-work executed at the Lithographic Department was Rs. 2,797, but the total profit, deducting the cost of colouring which was executed by job work, was Rs. 621.

When the survey of the Regulation Provinces of Bengal has been completed, the total cost will be nearly thirty-two lakhs of Rupees. The unsurveyed area is assumed at 18,000 miles, which may possibly be completed in 4 years.

COMMERCE AND SHIPPING OF PRINCE OF WALES' ISLAND, SINGAPORE AND MALACCA.

1856-57.

PRINCE OF WALES' ISLAND.

Value of *Imports* from

The United Kingdom.		
Silver	Rs. 1,36,956	
Merchandise	8,78,442	Rs. 10,15,398

North America.			
Gold ...	Rs.	17,065	
Silver ...		6,736	
Copper ...		23,576	
Merchandise ...		1,94,443	Rs. 2,41,820
Arabian Gulf.			
Silver ..	Rs.	22,453	
Merchandise ...		72,581	95,034
Ceylon.			
Merchandise ...			1,460
Hong-Kong.			
Silver ...	Rs.	307,631	
Merchandise ...		28,857	3,36,488
Other China Ports. ...			
Silver ...	Rs.	1,06,639	
Merchandise ...		6,10,100	7,16,739
France.			
Merchandise ...		...	54,188
Maldive Islands.			
Merchandise ...		...	9,803
Pegu.			
Silver ...	Rs.	83,200	
Merchandise ...		9,22,923	10,06,123
Singapore and Malacca.			
Silver ...	Rs.	8,10,626	
Merchandise ...		15,40,984	23,51,610
Siam.			
Gold ...	Rs.	269	
Silver ...		10,778	
Merchandise ...		14,96,004	15,07,051
Suez.			
Merchandise ...			17,514
Sumatra.			
Silver ...	Rs.	3,66,214	
Merchandise ...		25,33,691	28,99,905
Fort St. George.			
Silver ...	Rs.	16,000	
Merchandise ...		3,35,520	3,51,520
Bombay.			
Silver ...	Rs.	11,227	
Merchandise ...		51,054	62,281
Total Treasure, Foreign and Indian Ports	Rs.	19,19,370	
Total Merchandise		87,47,644	1,06,67,014

Value of *Imports re-exported.*

Treasure Rs. 35,87,955		
Merchandise 1,07,42,209		Rs. 1,36,62,164

Value of Exports by Sea to

The United Kingdom ...	Rs. 8,18,457
North America ...	... 1,82,813
Arabian Gulf ...	... 2,374
China Ports ...	... 20,648
France	... 2,245
Genoa	... 1,204
Pegu	... 1,83,612
Singapore and Malacca	... 1,17,058
Siam ...	... 58,986
Sumatra ...	... 53,449
Fort St. George ...	... 30,499
Bombay ...	... 73,344
Total Exports	Rs. 15,44,689

From Calcutta there were imported into Prince of Wales' Island.

Treasure ...	Rs. 50,857	
Merchandise ...	... 8,98,570	
To Calcutta Imports were re-exported.		
Treasure ...	Rs. 37,509	
Merchandise ...	... 9,42,198	9,79,707

To Calcutta there was exported-Merchandise ... 92,743

Compared with the previous year these results are as follows:—

	1855-56	1856-57.	*Increase.*	*Decrease.*
Imports				
Merchandise, Rs.	98,31,856	96,26,214	.....	2,05,642
Treasure, ,,	17,74,080	19,70,227	1,96,147	
Exports				
Merchandise, ,,	1,09,83,262	1,26,53,839	16,70,577	
Treasure, ,,	27,28,516	36,25,464	8,96,948	

COMPARATIVE Statement of the number of Vessels and Tonnage Arrived and Departed during 1855-56 *and* 1856-57.

	Arrivals.							
	1855-56.		1856-57.		Increase.		Decrease.	
Square-Rigged,	469	109142	494	106457	25	...	...	2685
Native Crafts,...	1470	34646	1838	38286	368	3642	...	...
Total, ...	1939	143788	2332	144743	393	3642	...	2685

	Departures.					
	1855-56.		1856-57.		Increase.	
Square-Rigged, ...	426	94890	460	112385	34	17495
Native Crafts, ...	2245	43630	2800	49736	555	6106
Total, ...	2671	138520	3260	162121	589	23601

SINGAPORE.

The general result of the Commerce of Singapore, during the year 1856-57, as exhibited in the return stands thus :—

	Merchandise.	*Tonnage.*	*Total.*
Imports, ...	Rs. 3,84,85,875...	1,084,9,005...	4,93,34,880
Ditto, Penang and Malacca,	26,81,620...	9,20,005...	36,01,625
Exports,.....	3,33,57,843...	1,07,75,135...	4,41,32,978
Ditto, Penang and Malacca,	20,75,678...	16,35,467...	37,11,145
Total Co.'s Rs.	7,66,01,016...	2,41,79,612...	10,07,80,628

The trade was with the following places (Merchandise and Treasure.) *Imports* from

The United Kingdom ...	Rs.	1,46,44,926
Aden ...	...	7,998
North America ...	...	3,98,904
South America ...	...	5,227
Amsterdam ...	...	9,904
Arabia and Gulf ...	...	1,20,348
Australia (Gold 2,00,142)	...	3,29,368
Austria ...	...	2,403
Belgium ...	...	3,97,857
Borneo ...	...	15,65,777
Celebes ...	...	10,79,819
Ceylon ...	...	1,07,477
China ...	...	61,97,825
Cochin China ...	...	9,74,739
Denmark ...	...	23,479
Egypt	...	23,464
France ...	...	3,14,757
Hamburgh and Bremar	...	13,02,466
Italy	...	1,010
Java, Rhio Minto, Bally and Sambama ...	...	58,85,670
Kongpoot ...	...	4,34,832
Malayan Peninsula ...	...	17,88,421
Manilla ...	...	5,48,835
Mauritius ...	...	7,874
Penang and Malacca ...	...	36,01,625
Siam ...	...	35,71,800
Suez ...	...	21,468
Sumatra ...	...	8,38,724
Turkey ...	...	3,020
Other Islands and Places	...	5,85,612
(External.)		
Arracan ...	...	1,33,930
Bombay ...	...	12,47,222
Calcutta ...	...	60,99,611
Chittagong ...	...	16,166
Cuddalore ...	...	112
Fort St. George ...	...	2,10,891
Karrikal ...	...	29,564
Maulmain ...	...	92,553
Negapatam ...	...	10,324
Pegu	...	2,69,013
Tranquebar ...	...	2,535
Tuticorin ...	...	28,965
	Total Rs.	5,29,36,505

Exports from Singapore to		
The United Kingdom	...	Rs. 53,74,679
Aden	...	27,186
Africa	...	12,390
North America ...	...	27,86,957
South „ ...	...	1,68,910
Amsterdam ...	...	40,975
Arabia and Gulf ...	...	3,68,021
Australia ...	...	4,26,764
Belgium. ...	...	55,237
Borneo... ...	...	13,80,995
Celebes... ...	...	13,81,991
Ceylon... „ ...	...	1,39,685
China	...	1,03,78,856
Cochin China ...	...	7,03,305
Denmark ...	...	28,332
France ...	...	14,61,137
Hamburgh and Bremen	...	6,28,253
Java &c. ...	...	51,27,986
Kongpoot ...	...	5,18,854
Malayan Peninsula	...	18,57,582
Manilla ...	...	1,86,884
Mauritius ...	...	1,36,979
Penang and Malacca	...	37,11,145
Siam ...	...	35,78,141
Spain ...	...	1,76,322
Sumatra ...	...	6,65,084
Other Places ...	...	5,50,333
(External.)		
Arracan	...	2,46,080
Bombay ...	...	9,32,668
Calcutta ...	...	35,81,971
Cuddalore ...	...	21,394
Fort St. George ...	...	5,97,822
Goa ...	...	943
Karrikal ...	...	63,175
Maulmain ...	...	55,994
Negapatam ...	...	2,39,134
Nagore ...	...	4,125
Pegu ...	...	2,24,966
Tranquebar ...	...	2,868
Total Exports		Rs. 4,78,44,123

The Shipping Returns for the Official Year 1856-57, as compared with those of the previous year, show the following results:—

	Square Rigged Vessels.		*Tons.*
Arrived in 1855-56,	1047	...	321,920
Ditto 1856-57,	1,394	...	513,335
Increase,	347	...	191,415
Departed in 1855-56,	1,039	...	303,242
Ditto 1856-57,	1,348	...	417,304
Increase,	309	...	114,062

	Native Vessels and Junks.		
Arrived in 1855-56,	2,521	...	90,675
Ditto 1856-57,	2,525	...	84,404
Increase,	4	Decrease,	6,271
Departed in 1855-56,	2,590	...	90,311
Ditto 1856-57,	2,920	...	101,706
Increase,	330	Decrease,	11,394

MALACCA.

Value of *Imports* from Penang and Singapore	Rs.	31,98,892
Arracan		4,579
Fort St. George		30
Calcutta		9,340
Total Imports	Rs.	39,49,013

Value of *Exports* to Arabian Gulf	Rs.	4,751
Malayan Peninsula		7,38,714
Arracan		404
Penang and Singapore		19,49,069
Sumatra		1,17,525
Fort St. George		2,999
Total Exports	Rs.	28,13,462

Shipping.	*No.*	*Tons.*
Arrivals.		
Square-rigged ...	... 288 ...	43,596
Native ...	... 628 ..	14,003
	916	57,599
Departures.	*No.*	*Tons.*
Square-rigged	290	43,699
Native	819	13,165
	1,109	56,864

As Penang, Singapore and Malacca are Free Ports, and there is no law to enforce the Registry of Trade, the returns are not quite accurate.

GENERAL JOHN JACOB ON THE REORGANIZATION OF THE ARMY IN INDIA.

The question of the numbers of European troops in India must depend not on the numbers of native troops employed, but on the nature of the duties to be performed, the climate, local position &c. On the Sind frontier, Europeans, for instance, would be totally useless, while Kurrachee is probably the best place in India to mass them. We cannot hold India by an Army chiefly or in large proportions composed of English soldiers. To attempt to do so will be ruinous. England could not supply the number required. Even if she could the mere brute force of hundreds of thousands of men becomes powerless before that of hundreds of millions of such people as the nations of India. The whole force of the Mogul empire was never able to subdue even one of these nations—the Rajpoots.

So to attempt to govern India would alienate from us the best of the inhabitants of the country who now are inclined to support our power, while the rest would be free to display their hostility. We would find ourselves in the position of a waggoner who, finding his horse unruly and troublesome, and perhaps getting a kick from one of the animals, should dispense with the services of the team, and place himself with one or two of his friends between the shafts.

The Empire can be held in perfect safety and security by English mind, by English moral power; by the influence of a moderate number of cultivated English gentlemen, rather than

by a multitude of rude soldiers. It is certain that the natives of India—even of Hindoostan proper—habitually under proper treatment, and commanded as *men*, in accordance with living principles and natural laws, can be made as good, true, and faithful soldiers as any Europeans whatever.

During 1857 a body of native officers and Hindostanee Sepoys in Upper Sind, chiefly from the disturbed districts around Delhi, amid strong temptations and alone, not only stood firm but repressed every attempt at rebellion, and thus saved the lives of all the Europeans in the province, and prevented a violent revolt throughout Sind and Beloochistan.

Bombay Light Cavalry.—Race, tribe and caste, should not be attended to in recruiting. The practice of administering oaths is erroneous as inducing untruth. Men should be enlisted in consideration of personal qualifications only, and entirely at the discretion of regimental commanders, the less the native Indian soldiers have to do with any Europeans, except gentlemen, the better. The Light Cavalry should be armed with cutting swords and short double barrel carbines. The dress should be a *loose* double-breasted tunic of thick broadcloth, with plenty of pockets in it; cloth overalls; the head dress should be a helmet, or Kilmarnock cap, or the native Indian puggree; for summer wear, the tunic should be of grey or drab coloured cotton cloth, with overalls of the same; accoutrements of black unvarnished leather.

There should be no articles of war which show a native soldier that we expect him to disobey. His only law should the orders of his English Commanding officer. If corporal punishment is necessary it should be followed by disgraceful dismissal. Under the authority of the European Commander only can a native court martial be useful. The native officers are generally as intelligent and useful as can be expected under the present construction of the service, which is such that the so-called native officers are not really officers at all. There can be no native officers in reality where the youngest cornet or ensign commands every native of every rank.

Pension should be given but not as a right at the discretion of a commanding officer. The pensioners and their families should reside at regimental head-quarters. Every man after twenty years' service might be allowed a moderate pension, and after 30 years' service a more liberal allowance. All promotion should go by merit only, of which the commanding officer should be the sole judge. A commanding officer should have full power to admit natives at once as native officers, if he thought proper to do so. There should be 4 European offi-

cers to each regiment. The men prefer the irregular service because in it the native officers are really so.

Bombay Irregular Cavalry.—No oath is used. In the Sind Horse, which the other corps should resemble all men's religions are respected, but none are allowed to be obtrusive, and an officer might serve for many years in the Sind horse without ever hearing even any mention of caste. Even when all public displays such as the Mohurrum and Dewallee were prohibited when necessary, all classes gave cordial support. If any man's peculiarities of caste, &c., be found to interfere with the performance of his duties as a soldier, these peculiarities should be treated exactly as would be bodily defects or infirmities, and the man so defective or infirm should not be enlisted, or his services should be dispensed with as soon as such defects become apparent. The pay of the irregular cavalry is too low it would be true economy to increase that of the Sind irregular horse serving on the frontier to forty-five rupees per man and horse monthly, and that of corps serving in the interior of India to thirty-six rupees monthly for each private man and horse complete, with corresponding rates of pay for the higher grades. The style of dress and equipments should be left to the discretion of commanding officers. In the Sind Horse no man is promoted from the ranks till he has passed an examination in his drill, nor to be Pay Duffadar till he be examined to his knowledge of accounts, Persian, writing &c. We must keep up both regular and irregular cavalry. But it is the practice now to style all corps irregular in which the horses and arms are the property of the men, and all corps regular in which the horses and arms belong to and are maintained by the State. But this practice leads to numerous erroneous impressions, and under this classification Cromwell's Ironsides themselves would become irregulars. If the European officers were properly selected, and left to rule their regiments as they found best, a perfectly regular native Indian cavalry could be formed on the Silliḍar system (that is, the system of the men furnishing their own horses and arms), which should be more efficient than any cavalry now known in the East, whether European or Asiatic, and which should at the same time cost the State only two-thirds of the cost of the existing native light cavalry of India.

The average cost to Government of horses of the regular cavalry is Rs. 500. The average cost of the Sind irregular horses is Rs. 225. The introduction of the English Horse into India has been fatal to the studs. The breed of saddle horses in England has notoriously degenerated exactly in proportion as it has increased in height. None but Arab blood should be ad-

mitted. Stallions should be got from the interior of Africa and if that is impracticable, sufficiently good horses would, after a time, be found in the Bombay market. The idea of standard height should be done away with. If horses were selected only on consideration of their ability to do the work required of them, nearly two thousand Arab horses annually could be supplied for our remounts more than are now purchased.

The pay of the Sind Irregular Horse is 30 Rs. for horse and men complete. No debts are permitted in it, but when 200 men of the Poona Horse were transferred to it, they brought with them debts acknowledged by the commanding officer to the amount of forty thousand rupees. In his scheme for the reorganization of the Indian Army General Jacob recommends that the Armies of the Presidencies should be henceforth styled the Royal Armies of India, and that a 4th Presidency, the North West Presidency with Lahore as its capital, and a 4th Army should be formed. His "gradation list" is described by Sir Bartle Frere*

For an army of the strength of the present army of Bombay the following establishment might be proper:—

Battalions or Regiments.	Cols.	Lt.-Cols.	Capts.	Lieuts.
5 Artillery	5	10	50	50
4 Engineers	4	8	40	40
3 Cavalry	3	6	30	30
33 Infantry	33	66	330	330
45	45	90	450	450

Generals 5
Lieutenant-Generals 10
Major-General ... 15

The ranks of major and ensign to be abolished.

The several ranks of officers, while unemployed in India, to receive pay as follows:—

General ...	...	1,500 Rs. per mensem.
Lieutenant-General	...	1,200 ,,
Major-General	...	1,000 ,,
Colonel ...	...	600 ,,
Lieutenant-Colonel	...	400 ,,
Captain ...	...	300 ,,
Lieutenant ...	...	200 ,,

These rates of pay to be allowed to officers wherever residing, by permission, in India, and the like number of pounds per

* Page 450.

annum to be allowed to each when absent from India on leave to Europe or elsewhere.

The option of retiring on full pay of the rank attained to in the general list to be allowed after 30 years, and on half pay after 20 years. Leave of absence to be granted at the discretion of the local Governments. Subscriptions to military and all other funds to cease to be compulsory. A distinct and separate civil service to be prospectively abolished. Officers while unemployed or employed in civil capacities are not to be in any way subject to the authority of the Commander-in-Chief of the army, or to military rule or etiquette.

All candidates appointed to the Indian service to be educated at a military college in England and to reside at such college for at least two years, and not more than four years. The minimum age for admission to be fourteen, and the maximum eighteen years. The course at the college to include full instruction in mechanical and in physical science generally, and in political economy, also riding, rifle practice, and hardy exercises.

For each native infantry regiment the establishment of English officers may be as follows:—

	Pay.
1 Colonel	600 Rs. per mensem.
1 Lieutenant-Colonel	400 „
2 Captains (to each Adjutant and Quartermaster)	300 „

The pay assigned to each being in every case staff pay, to be drawn in addition to the pay due to each, according to his rank in the general list. But though an officer may hold a lower rank in the general list than that which is assigned to his position in a regiment or on other military employment, the temporary rank is always to hold good for precedence and command during the period of employment.

For the cavalry the like establishment of officers may be allowed, with one hundred rupees extra pay to each rank, to cover the cost of horses and other expenses.

For a brigade of any strength:—

	Staff Pay.
1 Major-General	1,000 Rs. per mensem.
1 Captain, Major of Brigade ...	400 „
For a division;—	
1 Lieutenant-General ...	3,000 „
1 Lieutenant-Colonel, Adjutant General	400 „
1 Lieutenant-Colonel, Quartermaster-General	400 „
1 Captain, A. D. C.	300 „
1 Major-General, Adjutant-	

General of the Army ...	1,500	Rs. per mensem.
1 Major-General, Quartermaster-General	1,500	,,
1 Colonel, Deputy Adjutant General	500	,,
1 Colonel, Deputy Quartermaster-General	500	,,

Officers when absent on leave beyond their division to receive unemployed pay only. Colonels commanding native Indian regiments are to have full magisterial authority over all ranks of natives of India in their regiments, followers as well as soldiers. Such powers to extend to the award and infliction of imprisonment, with hard labour, for a period of seven years, without the confirmation of a higher authority being required; to imprisonment for fourteen years, subject to the confirmation of the general officer commanding the brigade; to transportation and capital punishment, subject to the confirmation of the general officer commanding the division. Regimental Lieutenant-Colonels and Captains are likewise to exercise magisterial powers, under the control of the Colonels commanding their regiments. Colonels of regiments are to be held strictly and solely responsible to their superior officers and to the State, but not to the native Indian soldiers, for the propriety of all such proceedings.

For the European infantry the establishment of officers per regiment may be:—

1 Colonel	600	Rs. per mensem.
2 Lieutenant-Colonels ...	400	,,
10 Captains	300	,,
1 Adjutant	300	To rank above the Lieutenants.
1 Quartermaster	300	
10 Lieutenants	200	Rs. per mensem.

The officers of artillery and of engineers each to be borne in a separate list up to the rank of colonel, inclusive; and thereafter to be incorporated in the general list of the whole army. The senior colonel of artillery or engineers, when senior in the army, being promoted to Major-General as vacancies may occur.

Unemployed pay to be the same for all arms.

Employed pay, whether regimental or ordnance, &c., to be allowed as for the Cavalry.

Each battalion of artillery to have field officers and staff as for an European regiment, the numbers of Captains and Lieutenants being adjusted according to circumstances, to the number absent on leave, and the number required for the ordnance

department and other artillery staff duties. All artillery officers in India to be considered as "employed" when not on leave.

In the ordnance department the rank and pay of the various grades to be adjusted as follows:—

Senior Commissary ...	...	as Colonel.
Senior Deputy Commissary	...	as Lieutenant-Colonel.
Commissaries of Division	..	as Captains.
Assistant Commissaries	...	as Lieutenants.
Commandant of Artillery—		
Major-General ...	...	1,100 Rs. per mensem.
Major of Brigade—Captain	...	500 „

" Inclusive of horse allowance.

No difference of pay between horse and foot artillery.

Engineer officers attached to the Engineer Corps, or holding other military appointments, to be on the same footing as artillery officers; but the duties of Engineer officers in India are generally purely civil, and their salaries, &c., should be adjusted specially for each appointment.

In all appointments other than military, officers will receive their unemployed military pay, in addition to such emolument as may be assigned to them in their civil capacities; and when absent on leave, or on any account other than public duty, beyond the range of their immediate superior, they will receive only the unemployed rates of pay.

In a letter to Sir Charles Trevelyan General Jacob urges the total abolition of purchase in the English Army, fixed permanent head quarters for each regiment in its native country, and promotion of fit men from the ranks to the highest grades. He ascribes the mutiny to our regulation system which has merely corrupted the raw material of our native army, made the men think us afraid of them, and made them strong only for evil. A system equally ill-adapted to the nature of the men would have made murderous and mutinous ruffians even of Europeans, as this has done with the Asiatics. He recommends the removal of the seat of government from Calcutta to Bombay or Agra, forty thousand Europeans would be ample for all India, of whom 10,000 should be quartered at Kurrachee, as the best and most convenient station in all India for European troops; five thousands might suffice for the Bombay Presidency, and a like number for Madras; ten thousand for Bengal; and the remaining ten thousand he would place at Simla. The whole of the artillery in India should be European, with the exception of a few troops and batteries, formed for special service in particu-

lar localities where European troops could not live, such as this frontier of Sind. The strength of the artillery in India should be increased. The total strength of the native troops should not be much reduced. Police, similar to that in Sind, should be organised for all internal public duties. A frontier field force should be embodied for service in Sind. If we attempt to govern by brute force, or by patronising Christian priests, bishops, and missionaries, we shall inevitably bring about absolute ruin.

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